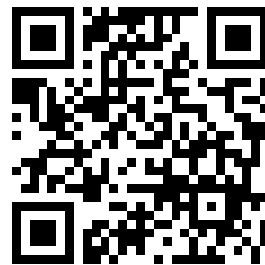

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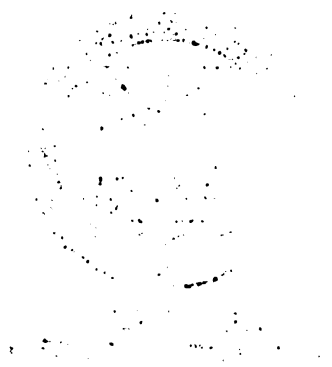


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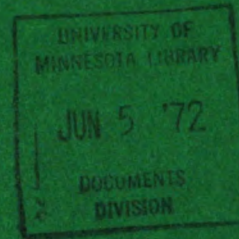


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appendix

marihuana: a signal of misunderstanding

The Technical Papers
of the First Report of
the National Commission
on Marihuana and
Drug Abuse



VOLUME I



An Act

To amend the Public Health Service Act and other laws to provide increased research into, and prevention of, drug abuse and drug dependence; to provide for treatment and rehabilitation of drug abusers and drug dependent persons; and to strengthen existing law enforcement authority in the field of drug abuse.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Comprehensive Drug Abuse Prevention and Control Act of 1970".

PART F—ADVISORY COMMISSION

ESTABLISHMENT OF COMMISSION ON MARIHUANA AND DRUG ABUSE

SEC. 601. (a) There is established a commission to be known as the Commission on Marihuana and Drug Abuse (hereafter in this section referred to as the "Commission"). The Commission shall be composed of—

- (1) two Members of the Senate appointed by the President of the Senate;
- (2) two Members of the House of Representatives appointed by the Speaker of the House of Representatives; and
- (3) nine members appointed by the President of the United States.

At no time shall more than one of the members appointed under paragraph (1), or more than one of the members appointed under paragraph (2), or more than five of the members appointed under paragraph (3) be members of the same political party.

(b)(1) The President shall designate one of the members of the Commission as Chairman, and one as Vice Chairman. Seven members of the Commission shall constitute a quorum, but a lesser number may conduct hearings.

(2) Members of the Commission who are Members of Congress or full time officers or employees of the United States shall serve without additional compensation but shall be reimbursed for travel, subsistence, and other necessary expenses incurred in the performance of the duties vested in the Commission. Members of the Commission from private life shall receive \$100 per diem while engaged in the actual performance of the duties vested in the Commission, plus reimbursement for travel, subsistence, and other necessary expenses incurred in the performance of such duties.

(3) The Commission shall meet at the call of the Chairman or at the call of a majority of the members thereof.

(c)(1) The Commission shall have the power to appoint and fix the compensation of such personnel as it deems advisable, without regard to the provisions of title 5, United States Code, governing appointments in the competitive service, and the provisions of chapter 51 and subchapter III of chapter 53 of such title, relating to classification and General Schedule pay rates.

(2) The Commission may procure, in accordance with the provisions of section 3109 of title 5, United States Code, the temporary or intermittent services of experts or consultants. Persons so employed shall receive compensation at a rate to be fixed by the Commission, but not in excess of \$75 per diem, including traveltime. While away from his home or regular place of business in the performance of services for the Commission, any such person may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by section 5503(b) of title 5, United States Code, for persons in the Government service employed intermittently.

(3) The Commission may secure directly from any department or agency of the United States information necessary to enable it to carry out its duties under this section. Upon request of the Chairman of the Commission, such department or agency shall furnish such information to the Commission.

(d)(1) The Commission shall conduct a study of marihuana including, but not limited to, the following areas:

(A) the extent of use of marihuana in the United States to include its various sources, the number of users, number of arrests, number of convictions, amount of marihuana seized, type of user, nature of use;

(B) an evaluation of the efficacy of existing marihuana laws;

(C) a study of the pharmacology of marihuana and its immediate and long term effects, both physiological and psychological;

(D) the relationship of marihuana use to aggressive behavior and crime;

(E) the relationship between marihuana and the use of other drugs; and

(F) the international control of marihuana.

(2) Within one year after the date on which funds first become available to carry out this section, the Commission shall submit to the President and the Congress a comprehensive report on its study and investigation under this subsection which shall include its recommendations and such proposals for legislation and administrative action as may be necessary to carry out its recommendations.

(e) The Commission shall conduct a comprehensive study and investigation of the causes of drug abuse and their relative significance. The Commission shall submit to the President and the Congress such interim reports as it deems advisable and shall within two years after the date on which funds first become available to carry out this section submit to the President and the Congress a final report which shall contain a detailed statement of its findings and conclusions and also such recommendations for legislation and administrative actions as it deems appropriate. The Commission shall cease to exist sixty days after the final report is submitted under this subsection.

(f) Total expenditures of the Commission shall not exceed \$1,000,000.



appendix

**marihuana:
a signal of
misunderstanding**

The Technical Papers
of the First Report of
the National Commission
on Marihuana and
Drug Abuse

March 1972

VOLUME I

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National Commission on Marihuana and Drug Abuse

801 19th Street N.W.
Washington, D.C. 20006

March 22, 1972

To The President and Congress of the United States:

As Chairman of the National Commission on Marihuana and Drug Abuse, I am pleased to submit to you our first year Report in conformance with the mandate contained in Section 601 of Public Law 91-513, The Comprehensive Drug Abuse Prevention and Control Act of 1970.

This Report "Marihuana, A Signal of Misunderstanding" is an all-inclusive effort to present the facts as they are known today, to demythologize the controversy surrounding marihuana, and to place in proper perspective one of the most emotional and explosive issues of our time. We on the Commission sincerely hope it will play a significant role in bringing uniformity and rationality to our marihuana laws, both Federal and State, and that it will create a healthy climate for further discussion, for further research and for a continuing advance in the development of a public social policy beneficial to all our citizens.

Whatever the facts are we have reported them. Wherever the facts have logically led us, we have followed and used them in reaching our recommendations. We hope this Report will be a foundation upon which credibility in this area can be restored and upon which a rational policy can be predicated.

By Direction of the Commission

Raymond P. Shafer
Raymond P. Shafer
Chairman

The President
The President of the Senate
The Speaker of the House

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Preface

Congress created the Commission on Marihuana and Drug Abuse to separate fact from fiction, reality from myth, and to achieve a balanced judgment on the marihuana issue. The first report of the Commission is an attempt to clarify the essential issues and concerns of our society regarding marihuana and to extrapolate our findings and conclusions into a reasonable societal response.

In an effort to present these complex issues with a maximum of clarity, comprehension, and readability, the Commission Report does not include references. This Appendix, however, fully documents the methodological and substantive issues presented in the Report. In addition to the technical data, the Appendix also contains the historical and philosophical matrix of the Report.

The papers of the Appendix are divided into six major parts. Part One deals with the biosocial aspects which relate to marihuana's effect on individuals as well as to the larger society.

It includes an historical survey of two types of marihuana use, medicinal and intoxicant, which constitutes a review of marihuana use in many parts of the world. An analysis of the accepted sociocultural parameters helps to put the American marihuana user into perspective.

Part One also presents detailed and current reviews of the botanical, psychopharmacologic, physiologic, and behavioral effects of marihuana on man.

Part Two, the social aspects of marihuana use, discusses patterns of the individual user as well as the relationship of marihuana use to violent and non-violent crime.

One of the most controversial issues in the study of marihuana is its relationship to other drugs. The second chapter of Part Two deals specifically with this issue and explores, in depth and with careful consideration, the hypothesis that marihuana use leads to other drugs, especially heroin.

Part Three is concerned with the legal aspects of the marihuana controversy. In order to place marihuana, a psychoactive drug, in proper per-

spective, a history of the control of marihuana, alcohol and tobacco is presented.

This section of the Appendix also reviews the current marihuana laws at the international, federal and state levels including statutes that require physicians to report drug addiction. The section concludes with a description of trafficking and distribution patterns of the drug.

Part Four, the response of the criminal justice system, analyzes law enforcement behavior with respect to marihuana use. The relationship between the *opinions* held by officials in the criminal justice system and their *behavior* toward marihuana offenders is also discussed.

Part Five presents the findings of the Commission-sponsored National Survey of public attitudes and behavior toward marihuana, other drug use and related social issues.

Part Six discusses the marihuana issue with respect to sociolegal policy practices and decisions. Included in the section is a discussion of the constitutional dimensions which form the basis for alternative models for the control of marihuana. A nationwide study of marihuana education presents policies and programs on a state-by-state basis and includes descriptions of ongoing marihuana education programs.

The Appendix concludes with a presentation of future research recommendations as suggested guidelines for various agencies, institutions and individuals engaged in research on marihuana.

Each of the papers contained herein represents the composite effort of the Commission members and staff, consultants, contractors and youth consultants.

Of necessity, space limitations precluded the publication in full of many excellent papers; many works are presented either in abridged form or integrated into the Commission's own presentation.

A list of all papers submitted to the Commission is presented at the conclusion of the Appendix. Should any reader wish to obtain a copy of a particular work, the request should be sent directly to the author and not to the Commission.

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part one biological aspects

I. History of Marihuana Use: Medical and Intoxicant

The term "marihuana" is a word with indistinct origins. Some believe it is derived from the Mexican words for "Mary Jane"; others hold that "marihuana" comes from the Portuguese word *mariguano* which means "intoxicant" (Geller and Boas, 1969: 14). This chapter outlines the many and varied uses of marihuana through history, and deals with its use in medicine and its use as an intoxicant.

The experience of the 1960's might lead one to surmise that marihuana use spreads explosively. The chronicle of its 3,000 year history, however, shows that this "explosion" has been characteristic only of the contemporary scene. The plant has been grown for fiber and as a source of medicine for several thousand years, but until 500 A.D. its use as a mind-altering drug was almost solely confined in India. The drug and its uses reached the Middle and Near East during the next several centuries, and then moved across North Africa, appeared in Latin America and the Caribbean, and finally entered the United States in the early decades of this century (Snyder, 1970: 129).

Meanwhile it had been introduced into European medicine shortly after the invasion of Egypt by Napoleon and had a minor vogue as an intoxicant for a time in France.

Regardless of which parts of the world are discussed, many of the same problems and concerns about cannabis are common to all, including the United States. Understanding its various uses during many centuries in diverse countries and continents can perhaps lead to a better understanding of marihuana in general.

History of the Medical Use

The history of cannabis products and their use has been long, colorful and varied. "To the agriculturist, cannabis is a fiber crop; to the physician, it is an enigma; to the user, a euphoriant; to the police, a menace; to the trafficker, a source of profitable danger; to the convict or parolee and his family, a source of sorrow" (Mikuriya, 1969: 34). The fact is that cannabis has been held simultaneously in high and low esteem at various times throughout recorded history, particularly in our own times.

The volume of information available on the medical application of cannabis is considerable. Occasionally certain references have been condensed or deleted, but this should not detract from the completeness of the report.

This historical survey of the medical uses of marihuana is introduced by a broad overview of its use, including brief notes on current and projected research, and then considers specific historical settings and circumstances in ancient China, moving on to Egypt, India, Greece, Africa, and the Western World.

Cannabis sativa has been used therapeutically from the earliest records, nearly 5,000 years ago, to the present day (Mikuriya, 1969: 34) and its products have been widely noted for their effects, both physiological and psychological, throughout the world. Although the Chinese and Indian cultures knew about the properties of this drug from very early times, this information did not become general in the Near and Middle East until after the fifth century A.D., when travelers, traders and adventurers began to carry knowledge of the drug westward to Persia and Arabia.

Historians claim that cannabis was first employed in these countries as an antispetic and analgesic. Other medical uses were later developed and spread throughout the Middle East, Africa, and Eastern Europe.

Several years after the return of Napoleon's army from Egypt, cannabis became widely accepted by Western medical practitioners. Previously, it had had limited use for such purposes as the treatment of burns. The scientific members of Napoleon's forces were interested in the drug's pain relieving and sedative effects. It was used during, and to a greater extent, following his rule in France, especially after 1840 when the work of such physicians as O'Shaughnessy, Aubert-Roche, and Moreau de Tours drew wide attention to this drug.

With the rise of the literary movement of the 1840-1860 period in France (Gautier, Baudelaire, Dumas, etc.), cannabis became somewhat popular as an intoxicant of the intellectual classes.

In the United States, medical interest in cannabis use was evidenced in 1860 by the convening of a Committee on Cannabis Indica of the Ohio State Medical Society, which reported on its therapeutic applications (McMeens, 1860: 1). Between the period 1840-1890, Walton states that more than 100 articles were published recommending cannabis for one disorder or another.

Concern about cannabis as an intoxicant led the government of India to establish the India Hemp Commission of 1893-94 to examine the entire question of cannabis use in India.

Paralleling the question over cannabis use in the latter half of the 19th century was the growing medical use of other medications superior to cannabis in their effects and more easily controlled

as to dose. Consequently, medical use of cannabis declined and cannabis began to lose support of the medical profession.

During the years between 1856-1937, cannabis lost its image as a medicine and was left with a disreputable image as an intoxicant. Strong public reaction coupled with a campaign in the public press led to a federal anti-marihuana law in 1937. (The drug was illegal in many states before 1937.) The issue of medical use remained active, however, and Dr. William C. Woodward, Legislative Counsel to the AMA, an opponent of cannabis use and the only physician to be a witness at the Taxation of Marihuana hearings, stated:

There are exceptions in treatment in which cannabis cannot apparently be successfully substituted for. The work of Pascal seems to show that Indian Hemp has remarkable properties in revealing the subconscious; hence, it can be used for psychological, psychoanalytic and psychotherapeutic research (Hearings, House of Representatives, 1937: 91).

Although cannabis drugs are generally regarded as obsolete and rarely used in "western" medicine today, cannabis is "still used extensively in the Ayurvedic, Unani and Tibbi systems of medicine of the Indian-Pakistani subcontinent" ("The Cannabis Problem," 1962: 27). The Pharmacopoeias of India mention cannabis use in the recent past. Two preparations of cannabis, a liquid extract and a tincture, are listed in the 1954 and 1966 *Pharmacopoeias* of India which contain descriptions of cannabis and its extract and how it is made (Chopra & Chopra, 1957: 9).

A more recent source makes reference to the fact that "in contemporary India and Pakistan, there continues to be widespread indigenous medical, 'quasi-medical,' and illicit use of both opium and cannabis" (Chopra & Chopra, 1957: 12-13). Bouquet notes that hemp resin is occasionally used in the native medicines of the countries where it is collected. He points especially to India where, "the medical systems . . . make much use of cannabis as a sedative, hypnotic, analgesic, anti-spasmodic and anti-hemorrhoidal" (*Bulletin on Narcotics*, 1962: 27).

According to the Canadian *Commission of Inquiry into the Non-Medical Use of Drugs*:

There is no currently accepted medical use of cannabis in North America outside of an experimental context. Although cannabis has been reported to produce an array of possibly useful medical effects, these have either not been adequately investigated, or can be replaced by using other more readily available and convenient drugs. The natural product's variability in potency and instability over time are among the factors which have led to its disfavor in Western 20th century medicine. . . . cannabis has often been employed in the past, and is currently used illicitly in North America, to reduce the secondary symp-

toms and suffering caused by the flu and the common cold. These . . . alleged therapeutic properties of cannabis have not been adequately studied in a scientific context, and their general medical potential remains a matter of conjecture (1970: 74).

Similar statements regarding cannabis are to be found in *Marijuana*, edited by Erich Goode, and in the textbook *Pharmacological Basis of Therapeutics* by Goodman and Gilman (1970: 300). Concerning therapeutic uses, the latter states:

Although cannabis was once used for a wide variety of clinical disorders and has even been demonstrated to have antibacterial activity, there are at present no well-substantiated indications for its use. It is no longer an official drug. Preparations are rarely available (cannabis preparation and synthetic THC are obtainable only for research purposes), and prescriptions are regulated by special tax laws.

Hollister (1971: 27) lists a few difficulties of the therapeutic use of cannabis:

- (1) The onset of the action of oral doses of THC is often rather slow, contrary to that of conventional sedative-hypnotics.
- (2) Doses high enough to produce a marked hypnotic effect are almost always accompanied by some degree of psychotomimetic-like perceptual disorders, which many patients might find disagreeable.
- (3) The fine titration of dose required to provide sedative effects is likely to be difficult.
- (4) The drug does not have novel effects compared with other sedative-hypnotics.

The Department of Health, Education, and Welfare report to Congress in 1971, *Marihuana and Health*, repeats the statement of the Canadian *Interim Report of Inquiry into the Non-Medical Use of Drugs*, and states: "There is no currently accepted medical use of cannabis in the United States outside of an experimental context" (DHEW: 1971: 27). Allen Geller and Maxwell Boas (1969: 4) think that cannabis' "unsavory reputation has largely stymied further research."

Despite the many statements discounting cannabis' therapeutic usefulness, some authorities maintain that its medical value might be reborn through further research and/or use. David Solomon, in his foreword to *The Marihuana Papers* (1968: xxi) argues that:

Marihuana should be accorded the medical status it once had in this country as a legitimate prescription item. After 1937, with the passage of the Marihuana Tax Act and subsequent federal and state legislation, it became virtually impossible for physicians to obtain or prescribe marihuana preparations for their patients. Thus, the medical profession was denied access to a versatile pharmaceutical tool with a history of therapeutic utility going back thousands of years.

In a 1970 article, "Pot Facing Stringent Scientific Examination," reference is made to Dr. Par who states that there are three areas in which

"chemical and animal experiments are under way:"

- (1) *Analgesia*—mood elevation plus analgesic power may make useful drug.
- (2) *Blood pressure reduction*—hypertension may be helped by new drugs which lower the blood pressure by what seems to be action on the central nervous system.
- (3) *Psychotherapeutics*—new compounds are antidepressants and anti-anxiety drugs (Culliton: 1970).

Mikuriya cites 11 studies concerning cannabis funded by the National Institute of Mental Health in 1967. The studies were "either specialized animal experiments, part of an observational sociologic study of a number of drugs, or explorations of chemical detection methods" (Mikuriya, 1969: 38).

Feinglass has pointed to four general categories into which the clinical studies of marihuana could be divided (1968: 206-208). They are:

- (1) *Anticonvulsant effects*—treatment of tetanus, convulsions of rabies, epilepsy, and infant convulsions.
- (2) *Psychotherapeutic actions*—appetite-stimulation, treatment of depression, and as a sedative and hypnotic in reducing anxiety; treatment of addiction.
- (3) *Antibiotic properties*.
- (4) *Pain-affecting power*.

Grinspoon suggests:

Very little research attention has been given to the possibility that marihuana might protect some people from psychosis. Among users of the drug, the proportion of people with neuroses or personality disorders is usually higher than in the general population; one might therefore expect the incidence of psychoses also to be higher in this group. The fact that it is not suggests that for some mentally disturbed people, the escape provided by the drug may serve to prevent a psychotic breakdown (1969: 24).

Mikuriya lists many possible therapeutic uses of THC and similar products in his paper "Marihuana in Medicine: Past, Present and Future." He includes:

Analgesic-hypnotic, appetite stimulant, antiepileptic, antispasmodic, prophylactic and treatment of the neuralgias, including migraine and tic douloureux, antidepressant-tranquillizer, anti-asthmatic, oxytocic, anti-tussive, topical anesthetic, withdrawal agent for opiate and alcohol addiction, child birth analgesic, and antibiotic (1968: 39).

China

The oldest known therapeutic description of cannabis was by the Emperor Shen-Nung in the 28th century B.C. in China, where the plant had long been grown for fiber. He prescribed cannabis for beri-beri, constipation, "female weakness," gout, malaria, rheumatism and absent-mindedness (Bloomquist, 1968: 19).

Egypt

In Egypt, in the 20th century B.C., cannabis was used to treat sore eyes. Additional medical usage was not reported until much later.

India

Prior to the 10th century B.C., *bhang*, a cannabis preparation, was used as an anesthetic and antiphlegmatic in India. In the second century A.D., a Chinese physician, Hoa-Tho, prescribed it as an analgesic in surgical procedures (Mikuriya, 1969: 34).

From the 10th century B.C. up to 1945 (and even to the present time), cannabis has been used in India to treat a wide variety of human maladies. The drug is highly regarded by some medical practitioners in that country.

The religious use of cannabis in India is thought to have preceded its medical use (Blum and Associates, II, 1969: 73; Snyder, 1970: 125). The religious use of cannabis is to help "the user to free his mind from worldly distractions and to concentrate on the Supreme Being" (Barber, 1970: 80).

Cannabis is used in Hindu and Sikh temples and at Mohammedan shrines. Besides using the drug as an aid to meditation, it is also used to overcome hunger and thirst by the religious mendicants. In Nepal, it is distributed on certain feast days at the temples of all Shiva followers (Blum & Associates, 1969, II: 63).

The Hindus spoke of the drug as the "heavenly guide," "the soother of grief." Considered holy, it was described as a sacred grass during the Vedic period (Fort, 1969: 15). A reference to cannabis in Hindu scriptures is the following:

To the Hindu the hemp plant is holy. A guardian lives in *bhang* . . . *Bhang* is the joy giver, the sky flier, the heavenly guide, the poor man's heaven, the soother of grief . . . No god or man is as good as the religious drinker of *bhang*. The students of the scriptures of Benares are given *bhang* before they sit to study. At Benares, Ujjain and other holy places, yogis take deep draughts of *bhang* that they may center their thoughts on the Eternal . . . By the help of *bhang* ascetics pass days without food or drink. The supporting power of *bhang* has brought many a Hindu family safe through the miseries of famine (Snyder, 1970: 125).

Greece

In ancient Greece, cannabis was used as a remedy for earache, edema, and inflammation (Robinson, 1946: 382-383).

Africa

Cannabis was used in Africa to restore appetite and to relieve pain of hemorrhoids; its antiseptic

uses were also known to certain African native tribes (O'Shaughnessy, 1842: 431). Various other uses, in a number of countries, included the treatment of tetanus, hydrophobia, delirium tremens, infantile convulsions, neuralgia and other nervous disorders, cholera, menorrhagia, rheumatism, hay fever, asthma, skin diseases, and protracted labor during childbirth.

The 19th Century

Documents of the 19th century report on the use of cannabis to control diarrhea in cholera and to stimulate appetite. In his reports of the late 1830's and early 1840's, O'Shaughnessy (1842: 431) stated that tetanus could be arrested and cured when treated with extra large doses of cannabis.

John Bell, M.D., Boston, reported enthusiastically in 1857, about the effects of cannabis in the control of mental and emotional disorders as opposed to the use of "moral discipline" to restrain the mentally ill. Similarly, in 1858, Moureau de Tours reported several case histories of manic and depressive disorders treated with hashish (Walton, 1938: 3).

The Ohio State Medical Society's Committee on Cannabis Indica, convened in 1860, reported that their respondents claimed cannabis successfully treated neuralgic pain, dysmenorrhea, uterine hemorrhage, hysteria, delirium tremens, mania, palsy, whooping cough, infantile convulsions, asthma, gonorrhea, nervous rheumatism, chronic bronchitis, muscular spasms, tetanus, epilepsy and appetite stimulation (McMeens, 1860: 1).

The India Hemp Commission (1894: 174) likewise was informed of similar medicinal uses for cannabis. Specific reports included the use of cannabis as an analgesic, a restorer of energy, a hemostat, an ecboic, and an antidiaretic. Cannabis was also mentioned as an aid in treating hay fever, cholera, dysentery, gonorrhea, diabetes, impotence, urinary incontinence, swelling of the testicles, granulation of open sores, and chronic ulcers. Other beneficial effects attributed to cannabis were prevention of insomnia, relief of anxiety, protection against cholera, alleviation of hunger and as an aid to concentration of attention.

MEDICAL USES IN THE 20TH CENTURY

Despite the fact that marihuana was made illegal in the United States in 1937, research has continued on the medical uses of marihuana. The findings include various possible medical applications of cannabis and its chemical derivatives.

One of the most recent and interesting findings (Frank, 1972) concerns the effect of cannabis in reducing intraocular pressure. It was found that as the dose of marihuana increased, the pressure within the eye decreased by up to 30%. This occurred in normal persons as well as in those with glaucoma, a disease of the eye in which increased intraocular pressure may cause blindness. Much more research is necessary in connection with this experimental clinical finding before final judgment can be passed on such a possible therapeutic value.

During the past 20 years in western medicine, marihuana has been assigned antibiotic activity; as a result, several studies relating to this possibility have been undertaken. H. B. M. Murphy (1963: 20) reported investigations in Eastern Europe. He stated that "it is alleged to be active against gram positive organisms at 1/100,000 dilution, but to be largely inactivated by plasma, so that prospects for its use appear to be confined to E. N. T. (ear, nose and throat) and skin infections."

Dr. J. Kabelikovi (1952: 500-503) and his co-workers carried out tests on rats, which were similar to tests carried out with penicillin in vitro. The alcohol extract of cannabis was bacterially effective against many gram-positive and one gram-negative micro-organisms. It was also found that a paste form of external application was successful. According to Kabelikovi, "from a study of 2,000 herbs by Czechoslovakian scientists it was found that cannabis indica (the Indian Hemp) was the most promising in the realm of antibiotics."

In a 1959 publication of Pharmacie, Krejci stated: "From the flowering tips and leaves of hemp, *cannabis sativa* var *indica* bred in Middle Europe, were extracted a phenol and an acid fraction. From the acid fraction, two acids were obtained, of which one preserved its antibiotic properties" (p. 349). In another Czechoslovakian publication, Krejci (1961: 1351-1353) referred to two additional samples with antibiotic activity.

Sample 1 in Fig. 1 has been sufficiently identified as cannabidiolic acid and sample 9 as cannabidiol. Both fractions show antibiotic activity. The results of tests lead us to conclude that the antibacterial action of cannabis sativa is not identical to the hashish effect found, for example, in tetrahydrocannabinol. However, it was established that cannabis sativa is effective as an antibiotic for local infections.

Kabelik, Krejci, and Santavy (1960: 13) include in "Cannabis as a Medicant" the various micro-organisms against which cannabis is effective.

Proof could be furnished that the cannabis extracts produce a very satisfactory antibacterial effect upon the

following microbes: staphylococcus pyogenes aureus, streptococcus alpha haemolyticus, streptococcus beta haemolyticus, enterococcus, diplococcus pneumonia, B. anthracis, and corynebacterium diphtheriae i.e., all of them gram-positive microorganisms. Noteworthy is the effect upon staphylococcus aureus strains, which are resistant to penicillin and to other antibiotics.

These authors also mentioned that E. coli (gram-negative bacteria) were tested and found to be resistant to the cannabis extract. One of the conclusions was "the possibility of utilizing the antibiotics locally without any danger of producing resistant strains to other antibiotics administered at the same time throughout treatment" (Kabelik, et al., 1960: 13).

Veliky and Genest in "Suspension Culture of Cannabis Sativa," (1970) reported that "the ethanol extract of cultured cells exhibited antibiotic activity against Bacillus megatherium, staphylococcus aureus and escherichia coli" (p. 493).

Other reports said that "a pronounced antibiotic effect has been observed in South America, where fresh leaves, after being ground, are used as a poultice for furuncles, and in folk medicine in Europe for treatment of erysipelas" (Kabelik, et al., 1960: 8).

This section on the antibiotic uses of cannabis concludes with a summary of several reports from various countries. In *Pharmacopee Arabe*: "The ground-up seeds are mixed with bread for people with tuberculosis" (Andrews and Vinkenoo, 1967: 145). In Czechoslovakia: "A preparation from seed pulp was . . . introduced by Sirek to act as a roborant diet in treatment of tuberculosis" (Kabelik, 1960: 8). "In Southern Rhodesia the plant is used as an African remedy for malaria, anthrax, sepsis, black water fever, dysentery, blood-poisoning, tropical quinine-malarial haemoglobinuria, and a wart medicine" (Watt, 1961: 13). In Argentina:

Cannabis is considered a real panacea for tetanus, colic, gastralgia, swelling of the liver, gonorrhoea, sterility, impotency, abortion, tuberculosis of the lungs and asthma . . . even the root-bark has been collected in spring, and employed as a febrifuge, tonic, for treatment of dysentery and gastralgia, either pulverized or in form of decoctions. The root when ground and applied to burns is said to relieve pain. Oil from the seeds has been frequently used even in treatment of cancer . . . (Kabelik, 1960: 8).

In 1949, Davis and Ramsey reported a study of the effect of THC on epileptic children. "The demonstration of anticonvulsant activity of the tetrahydrocannabinol (THC) congeners by laboratory tests (Loewe and Goodman, Federation Proc., 6: 352, 1947) prompted clinical trial in five institutionalized epileptic children" (David and Ramsey, 1949: 284-285). Of these five children, all had severe symptomatic grand mal epilepsy with men-

tal retardation; three also had cerebral palsy; and three had focal seizure activity. The EEG tracings were reported to be grossly abnormal in all five children. The results after treatment with homologues of THC, were reported as follows:

Three children—responded at least as well as to previous therapy.

Fourth child—almost completely seizure free.

Fifth child—entirely seizure free.

As a result of their study, David and Ramsey (1949: 284-285) felt that "the cannabinoids herein reported deserve further trial in non-institutionalized epileptics."

Dr. Vansim of Edgewood Arsenal has written in a recently published book "Psychotomimetic Drugs," that the synthetic preparations of cannabis are of interest. There are three areas where they may be of definite use in medicine (Efron, 1969: 333-334). One concerns the use of a cannabis analogue which Dr. Walter S. Loewe reported very effective in preventing grand mal seizures if given in small doses.

The second use refers to cannabis as an anti-depressant. Straub (Walton, 1938: 3), Adams (1942: 726-727), and Stockings (1947, 920-922) point to the possible use of cannabis and cannabis analogues in relieving dysphoria in depressed patients. Other authors (Parker and Wrigley, 1950: 278-279) had lesser success but recommended further research in this field.

A report from London in 1968 suggests that cannabis treats the symptoms and not the cause by focusing the user's attention on his anxieties and pains without helping him to resolve them (Report by the Advisory Committee, 1968: 11).

The third use is described by Douthwaite, who used hashish in 1947 "for reducing of anxiety and tension in patients with duodenal ulcer" (Pond, 1948: 279).

A report in a 1965 issue of *Medical News* ("Cardiac Glycosides," p. 6) suggests cannabis as treatment for a specific form of malignancy.

Cannabis is recognized as an appetite stimulant, which suggests that the drug might be useful in the treatment of pathological loss of appetite known as anorexia nervosa (Grinspoon, 1969: 21). Similar symptoms exist in terminal cancer patients who, when treated with cannabis over a short period of time, demonstrated stimulation of appetite, euphoria, increased sense of well-being, mild analgesia and an indifference to pain which reduced the need for opiates (DHEW, 1971: 11).

Cannabis has been recently proposed as an adjunct in the treatment of alcoholics and drug addicts. Roger Adams (1942: 726-727) and Todd

Mikuriya (1970a: 187-191) noted that the substitution of smoked cannabis for alcohol may have rehabilitative value for certain alcoholics.

Regarding the use of cannabis analogue in the treatment of drug, alcohol and depressive state withdrawal, Thompson and Proctor (1953: 520-523) report the following:

Depressive States:

20 cases of neurotic depression—4 improved (20%)

6 cases of psychotic depression—none improved (0%)

Post-Alcoholic Cases:

70 cases—59 reported clinical alleviation of symptoms (84%)

Drug Cases:

6 cases of barbiturate addiction—4 reported amelioration of symptoms (66%)

4 cases of dilaudid addiction—3 reported alleviation (75%)

2 cases of pantopan and one paregoric addiction—all reported smooth withdrawal (100%)

12 cases of Demerol addiction—10 withdrawals in one week (83%)

6 cases of morphine addiction—2 withdrawals without unpleasant symptoms (33%)

The doctors concluded that "Pyrahexyl (a synthetic cannabis-like drug) and related compounds are beneficial in the treatment of withdrawal symptoms from the use of alcohol to a marked degree, and in the treatment of withdrawal symptoms from the use of opiates to a less marked, but still significant degree" (Thompson & Proctor, 1953: 520-523).

Drs. Allentuck and Bowman (1942) undertook a study of the use of marihuana in the morphine abstinence syndrome. They stated:

A series of cases were selected from among drug addicts undergoing treatment. . . . Comparative results were charted for the gradual withdrawal, total withdrawal, and marihuana derivative substitution, as methods of treatment. . . . 49 subjects were studied. The results in general, although still inconclusive, suggest that the marihuana substitution method ameliorated or eliminated (the symptoms) sooner, the patient was in a better frame of mind, his spirits elevated, his physical condition was more rapidly rehabilitated, and he expressed a wish to resume his occupation sooner (p. 250).

In his study of the medical application of cannabis for Mayor LaGuardia's committee, Dr. Samuel Allentuck reported "favorable results in treating withdrawal of opiate addicts with tetrahydrocannabinol (THC), a powerful purified product of the hemp plants" (Mikuriya, 1969: 38).

Roger Adams' detailed studies, as reported by Dr. C. K. Himmelsbach in his 1944 article "Treatment of the Morphine Abstinence Syndrome with a Synthetic Cannabis-Like Compound" (1944: 26), indicated that "withdrawal manifestations were considered to be mild. The reported therapeutic value of marihuana was attributed to improved

appetite, greater sleep, euphoria, and a reduction of the intensity or elimination of abstinence phenomena." Himmelsbach, however, had lesser success when he studied the effect of a "pyrahexyl" compound on the morphine abstinence syndrome, as noted by his conclusions that:

- (1) Pyrahexyl compound appears to possess considerable cannabis-like effect when administered orally, but little or none when given intramuscularly.
- (2) When given by mouth in definitely effective amounts pyrahexyl compound had no appreciable ameliorative effect on the opiate abstinence syndrome (p. 29).

The New York City Mayor LaGuardia's Committee on Marihuana (1944: 147-148) reported two possible therapeutic applications of marihuana:

The first is the typical euphoria-producing action which might be applicable in the treatment of various types of mental depression; the second is the rather unique property which results in the stimulation of appetite. In the light of this evidence and in view of the fact that there is a lack of any substantial indication of dependence on the drug, it was reasoned that marihuana might be useful in alleviating the withdrawal symptoms in drug addicts. However, the studies here described were not sufficiently complete to establish the value of such treatment . . .

A study was then undertaken at Riker's Island (N.Y.) Penitentiary involving 56 morphine or heroin addicted inmates. Two groups were equally matched according to age, physical condition, length and intensity of habit, etc. One group received no treatment or Magendie's solution, and the other received 15 mg. of THC and/or placebo.

"The impression was gained that those who received tetrahydrocannabinol had less severe withdrawal symptoms than those who received no treatment or who were treated with Magendie's solution" the report stated. However, the report further said that this alleged therapeutic use of marihuana should be "investigated under completely controlled conditions" before meaningful conclusions can be developed (New York City Mayor, 1944: 147-148).

Some reports indicate that cannabis helps relieve labor pains. Such uses are reported among native tribes in South Africa and Southern Rhodesia: "The Suto tribe fumigates the parturient woman to relieve pain;" the Sotho women of Basutoland are reported as smoking cannabis to stupefy themselves during childbirth," and have also been known to "administer the ground-up achene with bread or mealiepap to a child during weaning" (Watt, 1962: 13).

The use of cannabis in the treatment of leprosy has been described in a 1939 dictionary of Malayan medicine: "Seeds of *Hydnocarpus anthelminica* . . . form the basis of the Tai Foong Chee

treatment of leprosy. After crushing and sieving, they are mixed with cannabis indica in the proportion of two parts of the seeds to one of Indian hemp" (Andrews and Vinkenoog, 1967: 146). Likewise, Watt and Breyer-Brandwijk quote Pappé that "the early colonist employed a decoction in the treatment of chronic cutaneous eruptions, possibly in leprosy . . ." (Andrews and Vinkenoog, 1967: 146).

Kabelik, Krejci, and Santavy have reported favorable results "in stomatitis aphthosa, gingivitis, and in paradentoses with a mouthwash of the following composition: Tinct. Cannabis 20.0, Tinct. Chamomillae, Tinct. jemmorum populi (or another tan for example, Tinct. Gallarum) āā 10.0 to be applied in the form of sprays or linaments to the inside of the mouth" (Kabelik et al., 1960: 13).

In reference to the use of cannabis, Chopra and Chopra (1957: 12-13) listed some preparations used in the practice of indigenous medicine in India in 1957. They summarize their article "*The Use of the Cannabis Drugs in India*" (1957: 12-13) by saying:

. . . with regard to the use of cannabis in Indian indigenous medicine at the present time, it may be said that it was and still is fairly extensively used in both the Ayurvedic (Hindu) and Tibbi (Mohammedan) systems of medicine as an anodyne, hypnotic, analgesic and antispasmodic, and as a remedy for external application to piles. It is also used in the treatment of dysmenorrhoea, rheumatism, chronic diarrhoea of the sprue type, gonorrhoea, malaria and mental diseases on the advice of itinerant practitioners of indigenous medicine as well as quacks who roam about the country. For medicinal purposes the drug is administered by mouth and hardly ever by smoking.

The use of cannabis drugs in indigenous medicine has greatly declined during recent years for two reasons—firstly, because of the rapid deterioration of the potency of cannabis drugs in storage, the specimens available on the market being often inert and quite useless; secondly, because a number of potent and effective drugs of the type used in western medicine are now available on the market and are used quite extensively by the practitioners of indigenous medicine in place of cannabis, for the anodyne, sedative and hypnotic effects. In the rural areas of India, however, the practitioners of indigenous medicine still use cannabis quite extensively in their practice.

The same article lists a variety of uses in which cannabis is employed therapeutically in veterinary medicine.

Dr. R. N. Chopra (1940: 361) reports the following medicinal household uses of Indian Hemp:

The hemp drugs are popularly used as household remedies in the amelioration of many minor ailments. A mild beverage made from bhang leaves is believed to sharpen appetite and to help digestion. Indian hemp is commonly used as a smoke and as a drink for its supposed prophylactic value against marihuana in malarious tracts. Bhang beverages form one of the popular household remedies for gonorrhoea and dysuria. On account of their

mild diuretic and sedative properties these drinks probably give a certain amount of symptomatic relief. Likewise, the use of bhang for dysmenorrhoea, asthma, and other spasmodic conditions is not uncommon. A poultice made from fresh leaves is a common household remedy for painful affections of the eyes, conjunctivitis, swollen joints, orchitis, and other acute inflammatory conditions.

Tuberculosis, anthrax, tetanus, and menstrual cramps are among the miscellaneous medical uses of cannabis reported. Reports from Mexico indicate the use of marihuana smoking "to relax and to endure heat and fatigue" (Mikuriya, 1969: 37).

Kabelik et al. (1960: 13) also discuss other varied uses of cannabis.

In human therapy the best results have been obtained with the following medicaments combined with substances derived from cannabis: dusting powder together with boric acid (otitis), ointment (staphylococcus infected wounds, staphylococcal mastitis, and so on), ear drops (otitis chron.), alcohol solutions with glycerine (treatment of rhagades on the nipples of nursing women—prevention of staphylococcal mastitis), aqueous emulsions (sinusitis), dentin powder with the IRC (Isolated Resin from Cannabis) (caries). The preparations mentioned above have been already tested clinically, and will eventually be made available for production. . . . the experiments made in clinical practice, particularly in stomatology, otorhinolaryngology, gynecology, dermatology, phthisiology, with some pharmaceutical preparations containing antibacterial substances from cannabis have been reported. Attention has been drawn to the advantageous utilization of the active substances from cannabis in veterinary medicine, and particularly in preventive medicine for antiparasitoses.

Murphy (1963: 20) refers to an article by Lang, "Treatment of Acute Appendicitis with a Mixture of Ma Jen," which says "the drug has apparently been used in China for the treatment of appendicitis." The Xosa tribe in South Africa "employs it for treatment of inflammation of the feet" (Kabelik et al., 1960: 7), while the Mfengu and Hottentot use the plant as a snake-bite remedy (Watt, 1962: 13).

Other therapeutic uses attributed to marihuana are for the treatment of migraine headaches, as an analgesic, and as a hypnotic. Hollister (1971: 28) stated that "other uses which have been proposed for marihuana include the treatment of epilepsy, as prophylaxis for attacks of migraine or facial neuralgia, or as a sexual stimulant."

History of the Intoxicant Use

The preceding history of the medical use of marihuana has provided an outline of how marihuana has been alleged to cure diseases and relieve pain. This section discusses the non-medical use of cannabis.

The survey includes a discussion of marihuana use in India, the rest of Asia, Africa, Europe, and

the United States; and a concluding analysis of the intoxicant use in contemporary times.

Assessing marihuana's use as an intoxicant is difficult because for many people around the world, its importance as an intoxicant has been secondary to its use as a folk medicine or a ceremonial adjunct (Grinspoon, 1971: 173-174). Caffeine and nicotine apart, cannabis is second in worldwide popularity only to alcohol.

India

Marihuana was probably first used as an intoxicant in India around 1000 B.C., and soon became an integral part of Hindu culture (Snyder, 1970: 125). In China, where the marihuana plant had been used to make cloth and certain medicines for centuries, it was not recorded as an intoxicant. Explanations are unclear as to why marihuana was used as an intoxicant in India but not in China.

Marihuana was also used as an intoxicant in other parts of the world prior to 500 A.D. but was not as well documented as the use of opium. The drug "nepenthe" in Homer's *Odyssey* is believed by a number of scholars to have been a brew in which the most active ingredient was hemp (Bretteaux, 1967: 10). Galen wrote in the second century that it was customary to promote hilarity and happiness at banquets by giving the guests hemp (Reininger, 1967: 14-15).

Cannabis is used in three different preparations in India (Snyder, 1970: 27). The first is called *bhang*, comparable in potency to marihuana in the United States. It is made from the leaves and stems of uncultivated plants and blended into a pleasant tasting liquid concoction. The second is *ganja*, more potent than *bhang*, made from the tops of cultivated plants. The third and most potent preparation, *charas*, is similar to hashish or "hash" and is obtained by scraping the resin from the leaves of the cultivated plants. Hard blocks are pressed from this material which are converted for smoking.

High-caste Hindus are not permitted to use alcohol. But they are allowed *bhang* at religious ceremonies, and also employ it as an intoxicant at marriage ceremonies and family festivals. *Bhang* is used by laborers in India in much the same way as beer is used in the United States (Barber, 1970: 80).

The lower classes of India use either a few pulls at a *ganja* pipe or sip a glass of *bhang* at the end of the day to relieve fatigue (Grinspoon, 1971: 173), to obtain a sense of well-being, to stimulate appetite, and to enable them to bear more cheerfully the "strain and monotony of . . . daily routines" (Geller and Boas, 1969: 5). These types of

users and objectives are frequently the reverse of those in the United States where marihuana users consider themselves an exclusive and advanced "in-group" (Andrews and Vinkenoog, 1967: iii). A major intoxicant use in India is for religious purposes.

Asia and the Middle East

Cannabis spread from India to other parts of Asia, to the Middle East and then to Africa and South America, although some believe it may have originated independently in the latter two continents (Fort, 1969: 15). Cultural values may have played a part in determining its use. Opium and cannabis were equally available in pre-Communist China; but cannabis had no vogue as an intoxicant (Barber, 1970: 80). The Chinese spoke of the plant as the "Liberator of Sin." In India, it was called the "Giver of Life" (Fort, 1970: 15). One author proposed that temperament may have also played a role in this determination, suggesting that perhaps the placid, practical Chinese did not appreciate the euphoria produced by cannabis (Snyder, 1970: 125).

Additional evidence of mid-Asian use comes from cuneiform tablet interpretations that ascribe use in Persia circa 700-600 B.C. and of the time of Ashurbanipal's Assyrian reign, 669-626 B.C. (Blum and Associates, 1969, I: 62).

The drug's popularity as an intoxicant spread to the Middle East and thoroughly permeated Islamic culture within a few centuries (Geller and Boas, 1969: 5). Because alcohol was prohibited to the followers of Mohammed, cannabis was accepted as a substitute.

The Myth of the Assassins

Two Muslim myths, one from the 10th century A.D. and the other from the 13th century A.D., have been the sources of some of the contemporary attitudes about the drug. The first myth deals with hashish as a magical eastern drug brought by the Arabs into Spain in the 10th century. These invaders confined its use primarily to themselves, taking it back to Africa when they left Spain. Although it did not become a European habit, some beliefs about the drug were left behind.

The existence of this "magical eastern drug" was probably known to Marco Polo, the Venetian traveler of the 13th century A.D. before he left on his journey to the East. Marco Polo returned to Europe with his own tale of cannabis which, in the potent form of hashish, was said to be used as an intoxicant by Hasan-I-Sabbah to send his ruth-

less followers on missions of murder. The word "assassin" was said to be derived from the word "hashish," or from Hasan (Geller and Boas, 1969: 6). Marco Polo had written about how this "Old Man of the Mountain" sent his men out on their missions with all the color and pageantry that Europeans associated with the East. As Marco Polo described:

In the territory of the Assassins there were delicious walled gardens in which one can find everything that can satisfy the needs of the body and the caprices of the most exacting sensuality. Great banks of gorgeous flowers and bushes covered with fruit stand amongst crystal rivers of living water. . . . Trellises of roses and fragrant vines cover with their foliage pavilions of jade and porcelain furnished with Persian carpets and Grecian embroideries.

Delicious drinks in vessels of gold or crystal are served by young boys or girls, whose dark unfathomable eyes cause them to resemble the Houris, divinities of that Paradise which the Prophet promised to believers. The sound of harps mingles with the cooing of doves, the murmur of soft voices blends with the sighing of the reeds. All is joy, pleasure, voluptuousness and enchantment.

The Grand Master of the Assassins, whenever he discovers a young man resolute enough to belong to his murderous legions . . . invites the youth to his table and intoxicates him with the plant "hashish." Having been secretly transported to the pleasure gardens the young man imagines that he has entered the Paradise of Mahomet. The girls, lovely as Houris, contribute to the illusion. After he has enjoyed to satiety all the joys promised by the Prophet to his elect, he falls back to the presence of the Grand Master. Here he is informed that he can enjoy perpetually the delights he has just tasted if he will take part in the war of the Infidel as commanded by the Prophet (Geller and Boas, 1969: 6).

Another translation (Kitti, 1967: 24) begins the tale this way:

Now no man was allowed to enter the Garden save those whom he intended to be his ASHISHIN.

In reality, this was a religious situation and scholars have long since exposed Marco Polo's tale as being a myth, at best an imaginative embellishment of tales he had heard.

Africa

Use of cannabis in most parts of Africa developed slowly, most of it during the past 100 years (Blum and Associates, 1969, I: 73). A report from Africa in 1891 (Reininger, 1966: 141-142), dealt with a tribe that used hemp as an intoxicant in their newly formed religion and in preparation for battle. A similar use is described in the Congo, when Simba warriors in 1964 were said to use a cannabis-alcohol mixture in preparation for battle, to rouse themselves for the battle and to magically guarantee immunity from harm.

In Morocco, marihuana, called *kif*, has been used as an intoxicant by adult males for centuries; that custom continues today even though the drug is illegal (Mikuriya, 1970: 122-123).

Although moderate use appears to be tolerated in the areas of India, North Africa and the Middle East, excessive use is generally viewed as indicative of serious personality problems (Geller and Boas, 1969: 7).

Europe

One of the more suggestive parallels between 19th century France and the United States today is the fact that the French interest in cannabis at that time was aroused by the returning French soldiers and scientists of Napoleon's army in Egypt, a source of the drug. A similar interest occurred in the United States after the Korean conflict, and has intensified since Vietnam (Geller and Boas, 1969: 7).

During the 19th century, European interest in the drug was aided by two scientific reports, the first by W. B. O'Shaughnessy in 1839, and the second report by Queen Victoria's physician, Russell Reynolds. Both men recommended its medical use for a variety of ailments and as a mild euphoriant (Grinspoon, 1971: 56). Cannabis received highly laudatory testimonials from the medical profession of that day and was readily available without prescription (Snyder, 1970: 121).

Interest in cannabis was further kindled by popular writers who used and spoke of hashish enthusiastically, including Charles Baudelaire, Arthur Rimbaud, and Pierre Gautier. Gautier and Baudelaire, in fact, were members of the *Club des Hachischins*, in which a number of writers and intellectuals gathered and experimented with hashish (Geller and Boas, 1969: 13).

Although the public delighted to read of the French writers' drug experiences, the public did not care to engage in the same kind of activity; to them the experiences were frightening and repugnant. "As a result, the smoking of hashish remained the sub-rosa province of a few European artists until the recent trans-Atlantic phenomenon of the American drug culture" (Geller and Boas, 1969: 8).

United States

The events surrounding the introduction of cannabis use to the New World are entirely unclear. Some historians say the Spaniards brought the plant with them in the 16th century, others say marihuana smoking came in with the slave

trade or with the Asian Indian migration of the late 18th century.

The hemp plant was cultivated in the United States for centuries, apparently without general knowledge of its intoxicating properties (Grinspoon, 1971: 10). Cannabis was an often used medicine in the United States in the 19th century. It was easily available without a prescription and was also widely prescribed by physicians (Snyder, 1970: 26). Hemp was used by the pioneers to cover their wagons. The plant was a major crop in Kentucky, Virginia, Wisconsin and Indiana, and was one of the more important southern agricultural products, after cotton. It is still used to make rope, twine and textiles, while the seed is used as bird food (Geller and Boas, 1969: 16).

Marihuana use as an intoxicant in the United States began slowly in the early part of this century. Puerto Rican soldiers, and then Americans who were stationed in the Panama Canal Zone, are reported to have been using it by 1916. American soldiers fighting Pancho Villa circa 1916 also learned to use it. This follows the first reported use in Mexico in the 1880's (Blum and Associates, 1969, I: 69-70). Intoxicant use in the United States is also traced to the large influx of Mexican laborers in the 1910's and 1920's (Geller and Boas, 1969: 14).

The 1933 Report of the "Military Surgeon" stated, regarding marihuana use among the soldiers in the Canal Zone, that:

Marihuana as grown and used on the Isthmus of Panama is a mild stimulant and intoxicant. It is not a "habit-forming" drug in the sense that the derivatives of opium, cocaine, and such drugs, are as there are no symptoms of deprivation following its withdrawal.

Delinquencies due to marihuana smoking which result in trial by military court are negligible in number when compared with delinquencies resulting from the use of alcohol drinks, which is also classed as a stimulant and intoxicant (Geller and Boas, 1969: 147).

The report went on to say that marihuana presented no threat to military discipline, and "that no recommendations to prevent the sale or use of marihuana are deemed advisable."

Cannabis has been rejected in various societies on ascetic grounds. In such puritanical societies such as the Wahabil of Arabia and the Senussis of Libya, no smoking of any kind was tolerated, nor was coffee. In North Africa, social rank dictated use: the aristocratic Moors scorned both hemp and tobacco smoking, preferring instead, as compatible with high status, opium eating (Blum and Associates, 1969, I: 73).

One statement highlighting this kind of value conflict comes from a Nigerian journalist (Davies,

1966: 299-300) attempting to explain the 15-year prison sentences of foreign tourists for growing and smoking marihuana:

There is a growing trend in the more economically advanced countries to indulge at leisure in the exploration of the personality. At a certain stage of development, there is less need to produce and more time to spend consuming. This is healthy. If used properly, marihuana could be helpful at this stage of development. However, countries which are only beginning to develop a more complex economic structure must channel all their energies into creating a new system. This means that they must sacrifice more of their pleasure. People who smoke hemp seem on the whole to be less aggressive than people who drink alcohol. Hemp smoking may have a positive value for certain social functions. . . .

One of the first acts of the Military Government was to issue a decree making it punishable by death to grow marihuana, and by up to twenty years of prison for merely being in possession of it . . . meantime, we Nigerians have to stop getting high for a while and develop our country.

In the United States, the decade of the 1960's has seen a spectacular and unprecedented spread of the use of marihuana, chiefly among the youth. An estimated 24 million persons have used marihuana and approximately 3.4 million are current users. The numbers involved and the fact that use spans all age groups and social classes in American life has produced marked public reaction and a need for more information on the drug.

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II. Biological Effects of Marihuana

Cannabis sativa is one of man's oldest and most widely used drugs. The substance has been used in various ways as long as medical history has been recorded and is currently used as a multi-purpose drug throughout the world (Adams, 1942; Adams, 1941-1942; Grinspoon, 1969; Indian Hemp, 1969; Walton, 1938).

During the past few years, a resurgence of the use of marihuana by western society, its increased importance as a social issue and the development of more precise compounds and analytic techniques have sparked dormant scientific interest in the substance. However, this effort has added little to what was already known about the clinical syndrome produced by cannabis (Hollister, 1971) and described by investigators during the last 100 years (Hollister, 1971; Beaudelaire, 1861; Moreau, 1845; Lewin, 1964; Indian Hemp, 1969; Mayor's Committee, 1944).

Strongly held, diametrically opposed opinions exist about whether the ultimate effects of cannabis use are harmful, harmless, or beneficial to human functioning (Pillard, 1970).

Despite these conflicting opinions, from a scientific perspective, the literature on marihuana is as clear, if not clearer, than for many other botanical substances consumed by man. Most of the

older reports suffer from multiple scientific defects such as biased sampling, lack of adequate controls, unsophisticated techniques, and use of unstandardized marihuana of unknown potency. Nevertheless, much is known about the use of cannabis by man. Marihuana has a unique position in the multitude of pharmaceuticals in that human experimentation has been greater than laboratory animal experimentation.

The crucial experiments about social effects from chronic use will be settled by close observation of those who use the drug. The issues of potential therapeutic utility; mechanisms of mental function alteration; and the relationship to mental illness will require more extensive laboratory experimentation (Hollister, 1971).

Botanical and Chemical Considerations

In the past several years considerable progress has been made in adding to the understanding of marihuana as a complex drug containing botanical substance. Much important information has been obtained from intensive investigation of marihuana of worldwide origin cultivated under Government contract by the University of Mississippi (Doorenbos et al., 1971).

Marihuana is a preparation derived from the hemp plant, *Cannabis sativa*. This plant is an annual which either is cultivated or grows freely as a weed around the world, including most of the United States. When cultivated in temperate climates, plantings are made in May to June. The seeds germinate in less than a week in moist soil. After thinning, the plants grow as rapidly as two feet a week during the peak growing season. They can reach a height of up to 18 feet at maturity, approximately three to five months after planting. Growth is greatly inhibited by inadequate light, water or soil nutrients.

Marihuana is produced by cutting the stem beneath the lowest branches, air drying, and stripping seeds, bracts, flowers, leaves and small stems from these plants. Stems and seeds are variably removed using a mesh screen producing manicured marihuana. Hashish is produced by scraping the thick resinous material secreted by the flowers (Doorenbos et al., 1971).

Many morphological variations in branching and leaf structure are observed among plants produced by different seed types. The characteristic leaf is palmately-compound and contains an odd number of coarsely serrated leaflets. Plants of a given seed type generally grow at similar rates and resemble each other. Thus, botanists believe, *Cannabis sativa* represents a single species which has not stabilized and has many variations (Doorenbos et al., 1971).

Cannabis sativa is a dioecious species with separate male and female plants, both producing flowers. Some monoecious variants are reported. Pollination appears to be accomplished by air currents. Bees are attracted by male flowers but not by female flowers. Sex cannot be established until flowering begins and the structure of the male and female flower is distinct. Male plants begin shedding leaves shortly after flowering, shed their pollen and die. Female plants lose their older leaves as the seed matures. After shedding their seed, they die. Contrary to popular belief, there is no significant difference in drug content between male and female plants at equivalent states of maturity (Fetterman et al., 1970; Ohlsson et al., 1971). Male plants mature earlier than the females, shed their pollen and die while the female plant is continuing to mature.

The drug content of the plant parts is variable. Generally, the drug content decreases in the following order: bracts, flowers, leaves. Practically no cannabinoids are found in the stems, roots and seeds. Obviously, fluctuations in pharmacologic activity of a sample of marihuana depend on the mixture of these plant parts which is determined

by the manicuring process (Fetterman et al., 1970).

Different variants of the plant contain different amounts of psychoactive drug. Variants of *cannabis sativa* cover a spectrum of drug contents. Generally, they can be classified as either drug or fiber genotype. Drug type is high in THC and low in cannabidiol and the fiber type is the converse. This type is determined genetically and transmitted by the seed.

Thus, seeds from different geographical areas produce plants with a wide range of drug content. For example, when grown under similar conditions, plants grown from seeds from Mexico may contain 15 times more psychoactive drug than those grown from seeds from Iowa. Of course, individual plants of the same variant often contain greatly different drug content (Fetterman, et al., 1971).

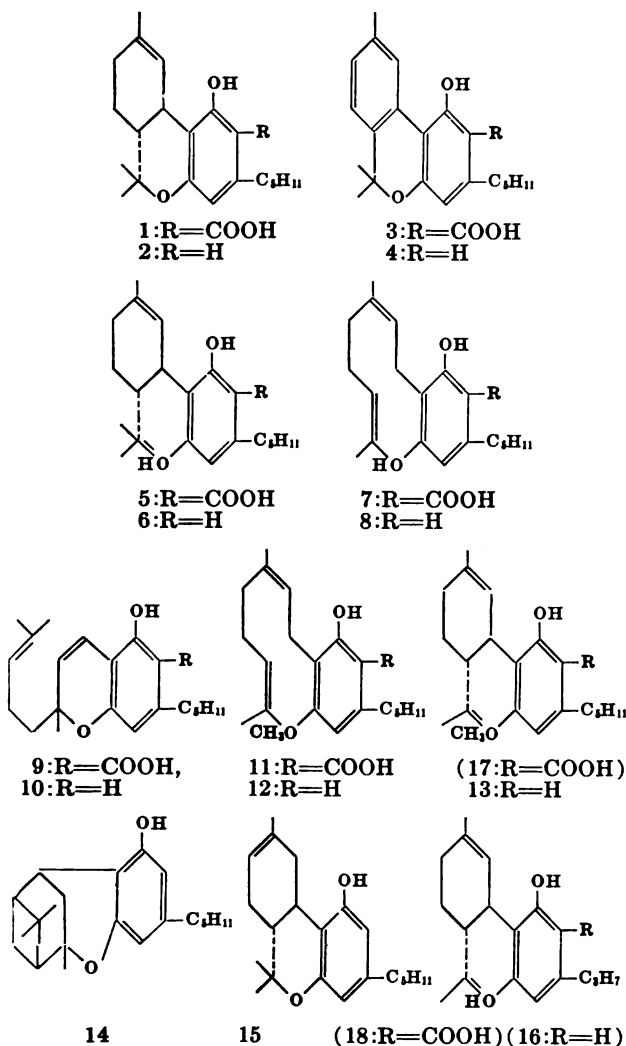
Environmental factors are not as important as heredity in determining type, but they influence to some degree the drug content. However, environmental factors, including type of soil, water, growing space, temperature and light do play an important role in determining the size and vitality of the plant (Doorenbos et al., 1971; Ohlsson et al., 1971; Phillips et al., 1970).

This notorious variability of cannabis preparations causes many disadvantages for detailed and reproducible biological work. Consequently, much effort has been expended to provide a firm chemical basis in order to provide pure and well-defined substances for research.

The major naturally occurring active component of cannabis, 1- Δ^9 -trans tetrahydrocannabinol, was not isolated in a pure form and its structure elucidated until 1964 (Gaoni and Mechoulam, 1964; Mechoulam and Gaoni, 1967; Mechoulam et al., 1970). In addition, the Δ^8 isomer, which is usually present in small quantities in the natural product representing less than 10% of the combined THC content, has a similar spectrum of activity (Hively et al., 1966). These two chemicals, available by industrial synthesis (Fahrenholtz et al., 1967; Petrzilka and Sikemeier, 1967) or by extraction from the natural plant, can apparently reproduce fully the effects of the crude drug in animals and man. More than 20 natural cannabinoids have been identified in the plant (Figure 1) (Mechoulam, 1970; Shani and Mechoulam, 1970; Doorenbos et al., 1971).

All but Δ^8 and Δ^9 THC are inactive psychopharmacologically and do not seem to exert potentiating or other effects. However, new compounds, cannabinoids and non-cannabinoids, are being isolated from the plant and require further inves-

FIGURE 1.—Natural cannabinoids

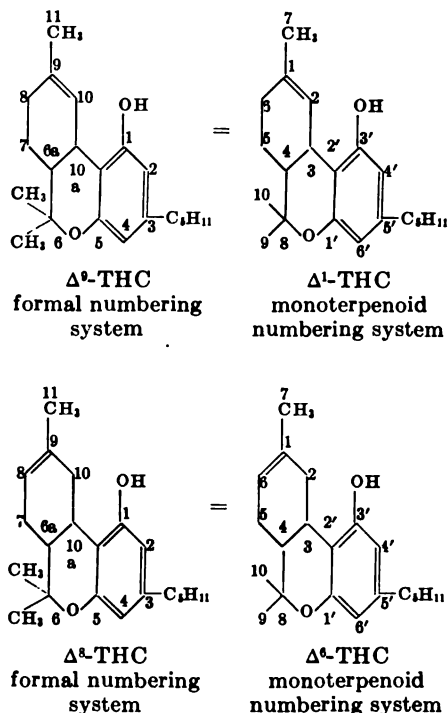


- | | |
|---|-----------------|
| 1. Tetrahydrocannabinolic acid | THCA |
| 2. Tetrahydrocannabinol | THC |
| 3. Cannabinolic acid | CBNA |
| 4. Cannabinol | CBN |
| 5. Cannabidiolic acid | CBDA |
| 6. Cannabidiol | CBD |
| 7. Cannabigerolic acid | CBGA |
| 8. Cannabigerol | CBG |
| 9. Cannabichromenic acid | CBCA |
| 10. Cannabichromene | CBC |
| 11. Cannabigerolic acid monomethyl-ether. | CBGAM |
| 12. Cannabigerol monomethylether | CBGM |
| 13. Cannabidiol monomethylether | CBDM |
| 14. Cannabicyclol | CBL |
| 15. Δ^8 -Tetrahydro-cannabinol | Δ^8 -THC |
| 16. Cannabidivarin | CBV |
| 17. Cannabidilic acid monomethyl-ether. | CBDAM |
| 18. Cannabidivarinic acid | CBVA |

Pertwee (1971) suggest cannabidiol may play this role.

The chemical nomenclature of tetrahydrocannabinols is in a state of confusion due to the existence of two numbering systems. The dibenzopyran or formal system treats the compound as substituted dibenzopyrans (Δ^9 THC) while the monoterpenoid system considers them as substituted terpenes (Δ^1 THC). The formal system will be used hereafter (Figure 2).

FIGURE 2.—Chemical nomenclature



Many of the natural cannabinoids are present in the plant as acids. These acids are believed to be psychopharmacologically inactive. However, they are converted rapidly when heated, and slowly when stored into their respective active neutral components (Figure 3) (Waller, 1971). This conversion (decarboxylation) does not apparently occur when the acids are absorbed after oral consumption (Mechoulam, 1970).

The proposed biogenesis (Figure 4) of Δ^9 THC appears to proceed through cannabidiol (CBD). Cannabis variates of the fiber type apparently do not perform this conversion. Thus, cannabidiol is the cannabinoid present in the largest percentage in the non-drug variety (Phillips et al., 1970). Marihuana appears to lose its potency over time due to conversion of THC to cannabinol (CBN) (Mechoulam, 1970) and this also apparently occurs more quickly for hashish implying the pres-

tigation. Several studies may indicate that some material present in natural marihuana may act synergistically with THC and potentiate its psychological effect (Lemberger, 1972). Paton and

ence of a stabilizing substance in the whole plant (Figure 5).

Recently, the n-propyl homologue of Δ^9 THC has been isolated from crude marihuana. It has

about 20% of the activity of Δ^9 THC in mice, and probably makes only a small contribution to the total marihuana effect (Gill, 1971). Merkus (1971) and Vree et al. (1971) have recently identified pro-

FIGURE 3.—Decarboxylation of THC acid

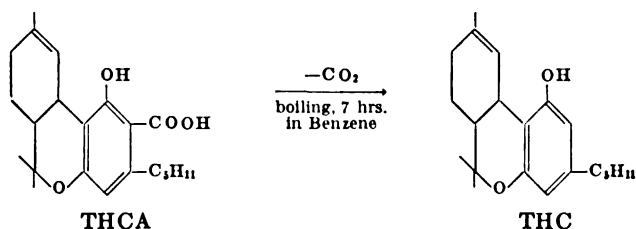


FIGURE 4.—Biogenesis of marihuana components

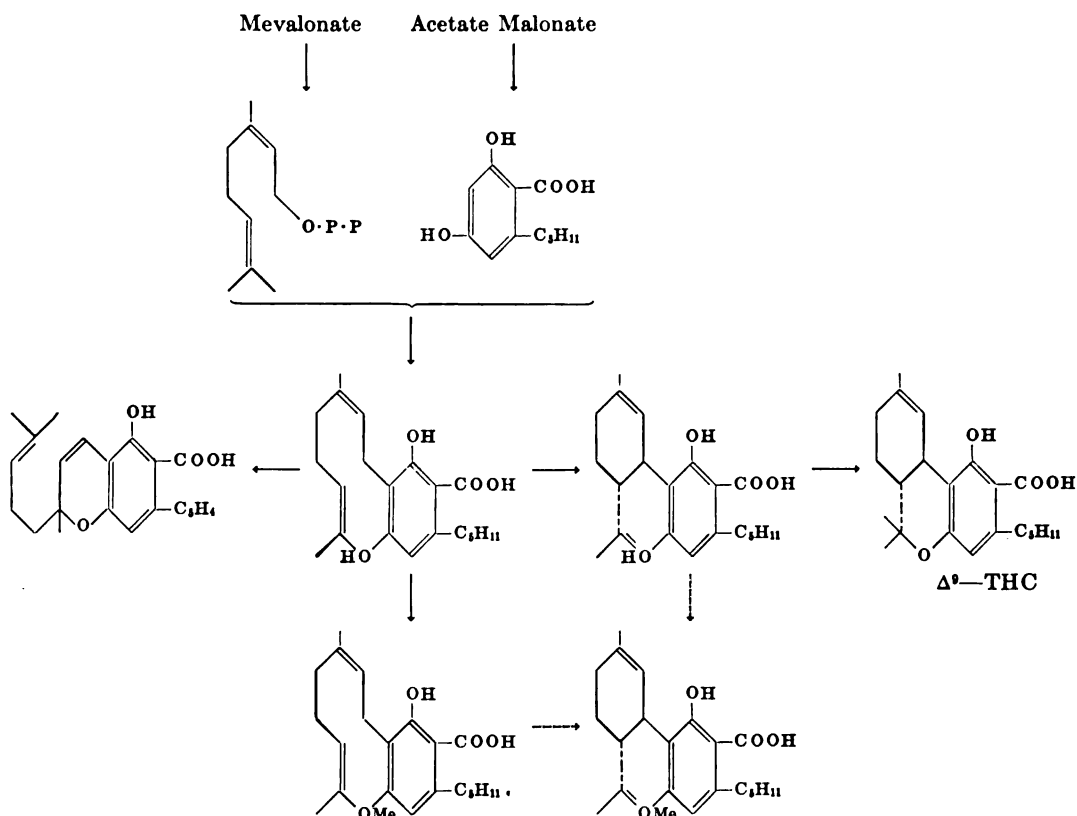
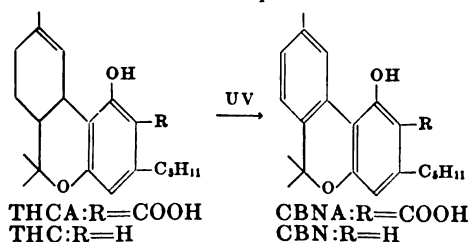


FIGURE 5.—Decomposition of THC



pyl and methyl cannabinol homologues in hashish in extremely small quantities.

In addition, numerous other non-cannabinoids have been identified in the natural material. Most of these have little or no psychoactivity (Gill et al., 1970; Bercht et al., 1971). Recently, waxes, starches, oils, terpenes and simple nitrogenous compounds including muscarine, choline and trigonelline as well as volatile low-molecular weight piperdines have been isolated.

Additionally, four more complex nitrogenous containing compounds of the generally-accepted alkaloid type have been reported in marihuana leaves in minute concentrations (average 0.002%). These produced decreased activity but no acute toxicity in mice (Klein et al., 1971).

Another laboratory has isolated two steroids and triterpenes from marihuana as well as tyramine amide derivatives from the roots (Doorenbos et al., 1971).

Analysis of the smoke obtained from marihuana has been investigated. As in the case of any combustible plant, a gas and particulate phase is produced. Both these phases are delivered to the lung. Both the gas and particulate phase consist of compounds present in approximately the same percentages as other burned cellulose containing materials except for the cannabinoid fraction. This includes carbon dioxide, carbon monoxide, and hydrogen cyanide gases. (Truitt et al., 1970)

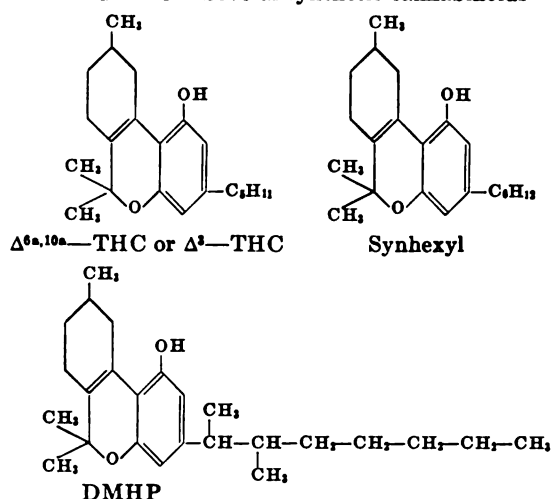
The remainder, the smoke condensate, consists of a complex mixture of relatively non-volatile compounds. Included in this mixture are the cannabinoids (16%), carbohydrates and alcohols (8%), fatty and aromatic acids (11%), polybasic acids (7%), aliphatic amines (1%), aromatic phenols (27%), aliphatic phenols (6%), tannin (6%), unidentified compounds (18%) (Truitt et al., 1970).

Another group of investigators (Magus and Harris, 1971) compared the tar collected from combustion of marihuana cigarettes with the tar yielded from tobacco cigarettes. They reported that the total tar yield from marihuana was slightly less than half that produced by an equal weight of tobacco. The tar contained similar constituents based on typical changes produced on skin of mice.

In addition, there a multitude of synthetic compounds related to the naturally occurring Δ^9 THC derivatives and much more potent (Figure 6). A large number of homologues have been prepared all with similar activity but differing widely in their potency.

In general, the activity of these compounds increases dramatically over that of Δ^9 THC by lengthening the 3 alkyl side chain to 6 and 7 carbons, with additional branching in the alpha and

FIGURE 6.—Several synthetic cannabinoids



beta positions. The dimethylheptyl analogue (EA1476 or DMHP) is the most active having 50 times the activity of Δ^9 THC. The 1-methyloctyl substitution (MOP, EA1465) is the next most potent compound. The 1,2-dimethylortyl substitution resulted in a 25 fold decreased activity from DMHP. (Domino et al., 1972; Sim and Tucker, 1963)

Numerous variations of the basic structures in the cyclohexene moiety of the molecule, as well as the replacement of both methyl groups by hydrogen resulted in partial and even complete loss of activity (Domino et al., 1972; Sim and Tucker, 1963).

Mechoulam (1971) has summarized the investigations related to the structure activity relationships of the cannabinoids as follows:

(1) The pyran ring with a hydroxyl group at 1 position and an alkyl group at the 3 position is an essential requirement for psychotomimetic activity, eg., cannabidiol is inactive.

(2) The aromatic hydroxyl group has to be free or esterified for activity.

(3) The presence of a carboxyl, acetyl or carbomethoxyl group in position 2 or 4 renders the compound inactive. Substitution with an alkyl group at position 2 retains activity.

(4) Dextrorotary (+) delta-9-THC is inactive whereas its optical isomer levorotary (−) delta-9-THC is active.

(5) Maximal activity is seen if the double bond is in the delta-9 or delta-8 position. The delta-6a, 10a-THC is relatively inactive.

(6) The activity of the delta-6a, 10a-THC can be increased by replacement of the pentyl side chain with a hexyl side chain to form synhexyl which is an active compound. Branching of the side chain may lead to considerable increase in

potency. The substitution of a dimethylheptyl side chain for the pentyl side chain in the delta-6a, 10a analogue of THC to form DMHP or EA1476 results in a marked increase in pharmacologic activity.

(7) Substituents at the 9 and 10 position have to be in the plane of the ring (that is equatorial) in order that high activity be retained.

More detailed information on materials, chemistry, bioassays, analytical methods, and methodology for detecting THC or its metabolites in biological fluids may be obtained from The Metabolism of the Tetrahydrocannabinols (Lemberger, 1972) and The Secretary of Health, Education and Welfare, 1972 *Report on Marihuana and Health*.

Factors Influencing Psychopharmacological Effect

A renewed interest in marihuana studies has been prompted by the recent clarification of the complexities of its chemistry, new techniques to quantify the amounts of active drug in natural materials, and the availability of purified tetrahydrocannabinols. These advances allow more precise scientific research on psychopharmacological effect.

DOSE-RESPONSE RELATIONSHIP

A major advance has been a quantification of dose of THC in relation to clinically observable phenomena. This has been extensively studied over a wide dose range for marihuana (Rodin and Domino, 1970; Melges et al., 1970; Tinklenberg et al., 1970; Weil et al., 1968; Meyer et al., 1971; Clark and Nakashima, 1968; Clark et al., 1970; Jones and Stone, 1970; Mayor's Committee, 1944; Manno et al., 1970) and Δ^9 tetrahydrocannabinol (Isbell et al., 1967; Waskow et al., 1970; Hollister et al., 1968; Perez-Reyes and Lipton, 1971; Lemberger et al., 1971; Dornbush and Freedman, 1971).

Investigations by Isbell et al. (1967), Kiplinger et al. (1971) and Renault et al. (1971) have clearly demonstrated that when reliable quantities of smoked marihuana or THC are delivered to the subject, a reproducible linear dose-dependent effect occurs on indices of physiologic, psychomotor, and mental performance as well as on mood and subjective experiences over a dose range of 12.50 to 200 micrograms of Δ^9 THC per kilogram of body weight.

In a 154 pound man this is comparable to consuming 0.88 to 17.5 milligrams of Δ^9 THC or 88 to 1750 milligrams of marihuana containing one

percent Δ^9 THC. It is generally assumed that good quality marihuana available in the United States contains 1% Δ^9 THC and an average marihuana cigarette consists of 500 milligrams of marihuana; thus, 5 milligrams of Δ^9 THC (Hollister, 1971).

As with most drugs, the larger the dose taken, the greater the psychopharmacologic effect. Isbell et al. (1967) noted that clinical syndromes vary from a mild euphoric feeling of relaxation at low doses (25 micrograms per kilogram) to an intensive hallucinogenic-like experience at high doses (250 micrograms per kilogram).

DOSE-TIME RELATIONSHIP

Similar time-action curves have been demonstrated for smoked Δ^9 THC and equivalent quantities of smoked marihuana (Hollister et al., 1968; Isbell et al., 1967; Renault et al., 1971; Kiplinger et al., 1971). Symptoms began almost immediately after smoking (2-3 minutes). At lower doses, the peak effect is seen at 10 to 20 minutes and the duration of effect is 90 minutes to two hours. At higher doses, symptoms persist for three to four hours.

Therefore, as with most drugs, the larger the dose taken, the longer the action. The subjective symptoms experienced by the subject appear to parallel in time the subjective effects and some physiological indices such as pulse rate (Isbell et al., 1967; Hollister, 1968; Renault and Schuster, 1971; Kiplinger et al., 1971; Galanter et al., 1972; Lemberger et al., 1971). Others such as reddening of the eyes have a delayed peak response and longer duration (Kiplinger et al., 1971).

ROUTE OF ADMINISTRATION

A second factor which influences the effect experienced by the user is the manner in which the substance is consumed. That is, whether it is smoked, swallowed or injected.

Isbell et al. (1967) demonstrated that smoked material is two and a half to three times as effective as orally consumed marihuana in the form of a 95% ethanolic solution in producing equivalent physiologic and subjective effects.

In addition, the oral time-action curve is extended with onset of symptoms one-half to one-hour after administration. A peak effect is reached in two to three hours and the effect persists for three to five hours at low doses and six to eight hours at larger doses (Hollister et al., 1968; Isbell et al., 1967; Lemberger et al., 1971; Perez-Reyes and Lipton, 1971).

In general, the effects produced by ingested THC or ingested marihuana extract are comparable to those produced by nearly one-third the

amount of smoked and inhaled THC or marihuana (Hollister, 1971).

Recent work has been reported which clarifies these findings. Lemberger et al. (1971) studied absorption into the blood utilizing radioactive labeled THC by three routes of administration: smoked, ingested in 95% ethanolic solution in cherry syrup, and intravenously injected. The first appearance of the drug into the blood was immediate intravenously; almost immediate by inhalation; and delayed for 15 to 30 minutes when ingested.

Perez-Reyes and Lipton (1971) using labeled Δ^9 THC demonstrated that rate of absorption by the gastrointestinal tract and the duration of action is greatly influenced by the vehicle used to ingest the drug. Speed and completeness of absorption varied when the THC was dissolved in 100% ethanol or sesame oil or emulsified with a bile salt (sodium glycocholate), and administered to a subject who had fasted 12 hours. With the bile salt vehicle, the physiologic and subjective effects were noted between 15 to 30 minutes after ingestion and lasted two to three hours. In contrast, the effects, with ethanol or sesame oil, appeared after one hour and lasted four to six hours.

Hollister and Gillespie (1970) hypothesized that this delayed gastrointestinal absorption of THC might be accounted for by the nonpolar vehicle required to dissolve THC or marihuana extracts.

Furthermore, Perez-Reyes and Lipton (1971) found that the peak levels and duration of radioactivity in the plasma paralleled the physiologic and subjective effects, although the plasma levels remained high for a longer period of time than the effect. Subjects receiving the drug emulsified in sodium glycocholate or dissolved in sesame oil had three times higher plasma levels of radioactivity with much less excreted in the feces than those receiving the drug dissolved in ethanol.

These results indicate that the THC was poorly absorbed from the gastrointestinal tract when given in an alcoholic solution. The sesame oil solution and the glycocholic acid preparation allowed more complete absorption and the latter preparation was much faster. It is of interest that the degree of subjective high after ingestion of 37 milligrams Δ^9 THC also parallels the plasma radioactivity.

Thus, the subjects reported their experience as intense and unpleasant both with the bile salt and the sesame oil, and as moderate and entirely pleasant with ethanol. (Perez-Reyes and Lipton, 1971) This correlates well with earlier findings of Hollister et al. (1968).

QUANTIFICATION OF DOSE DELIVERED

The problem in quantifying the THC dose delivered by different routes of administration has been clarified by several studies using radioactive compounds. However, until a method for determining the THC blood concentration is developed, only estimates on amount delivered are possible.

Radioautographic studies clearly demonstrate that intravenous injection gives the most complete and consistent delivery (Lemberger et al., 1971; Mc Isaac et al., 1971; Ho et al., 1971; Kennedy and Waddell, 1971; Idänpään-Heikkilä, 1971). These investigators have demonstrated that THC is poorly absorbed from the injection site after intraperitoneal or subcutaneous injection.

As discussed earlier, the completeness of absorption occurring after oral administration of THC appears to depend upon the vehicle. Judged by radioactivity levels, almost complete absorption of the THC occurs with an oil or bile acid vehicle, but absorption is incomplete with an alcohol vehicle. (Perez-Reyes et al., 1971)

Recent animal studies performed for NIMH indicated that the oral dose necessary to produce comparable gross behavioral changes in lab animals is about three times higher than the intravenous dose (*Marihuana and Health*, 1971: 171). Ferraro (1971) demonstrated the comparability of effective oral doses of THC in chimpanzees and humans. Furthermore, preliminary work performed in the laboratories of Mc Isaac (1971) and Harris (1971) and Mechoulam (1971) appear to indicate that the intravenously administered dose of Δ^9 THC necessary to produce detectable behavioral changes in monkeys (20 to 50 microgram/kg) on conditioned learning tasks is comparable to that in man (Kiplinger et al., 1971; Lemberger et al., 1971).

The dose of THC absorbed from natural marihuana extracts ingested orally is uncertain. THC is present as an acid in variable quantities in natural marihuana. THC acid has not presently been proven to be active. Claussen and Korte (1968) reported that the THC carboxylic acid is converted to free THC during the smoking process. Whether these acids are active themselves; are absorbed from the gastrointestinal tract or converted there into THC; or are decarboxylated in the body is unknown presently.

Because inhalation is the most widely used route of administration of marihuana, several laboratories have investigated the effect of combustion and smoking on marihuana. Because techniques and conditions varied between laboratories, precise quantification of the delivery to the smoker's lungs is uncertain.

Manno, et al. (1970) calculated that about 50% of the THC contained in a marihuana cigarette would be delivered to the smoker's lungs for absorption if the entire cigarette were smoked in 10 minutes and each inhalation was retained for 30 seconds with no side stream loss. Truitt (1971) and co-workers (Foltz et al., 1971) found that 50% of THC was pyrolyzed and 6% was lost in the side stream while noting that almost 21% of the THC remained in the butt when three-fourths of the cigarette is consumed.

Agurell and Leander (1971) studied the transfer of THC using actual smoking subjects where only the main stream smoke was collected. They found that 14-29% of the THC was transferred in the mainstream smoke for a cigarette and 45% for a pipe. However, they stated that this amount transferred would be comparable if no butt was left.

Agurell and Leander found that the amount transferred was not effected by depth of inhalation but that smokers using deep inhalation retained 80% of the transferred THC while those using superficial inhalation tended to exhale more than 20% of the transferred THC. Mikes and Waser (1971) also found about 22% in the mainstream smoke.

These divergent data appear to be comparable when corrected for loss to sidestream and retention in the unsmoked portion. Thus, the efficiency of delivery of THC by smoking and inhalation using good techniques, and smoking the entire cigarette approximates 40-50% of the original THC contained. A small fraction is lost in the uninhaled sidestream smoke, about 50% is destroyed during pyrolysis and a variable amount is exhaled from the respiratory dead space.

In apparent confirmation, Lemberger et al. (1971, 1972), using radiolabeled THC added to a marihuana cigarette, found that the initial plasma level of radioactivity after smoking was about one-half the level after intravenous injection. Oral administration of the same dose of THC in an alcohol vehicle produced about one-half the peak level as smoking. However, Galanter et al. (1972) noted marked variability in the amount of THC absorbed using a standardized routine of inhaling, breath-holding and finishing the cigarette within a set time period.

EFFECT OF PYROLYSIS ON THE CANNABINOID

Several investigators have studied the effect of pyrolysis on the cannabinoids. Most have concluded that only negligible changes occur in the original cannabinoid fraction of marihuana except

for decarboxylation of the acids to the cannabinoids. No evidence was found for isomerization of Δ^9 THC or Δ^8 THC nor the formation of any new pyrolysis products (Manno et al., 1970; Coutselinis & Miras, 1970; Claussen and Korte, 1968; Foltz et al., 1971; Agurell and Leander, 1971). Mikes and Waser (1971) suggested that a small percentage of cannabidiol was converted to Δ^9 THC, but this observation was not confirmed by the other groups.

Coutselinis and Miras (1970) noted that less THC was destroyed during smoking when Δ^9 THC was the only cannabinoid present rather than when a resin or a mixture of cannabinoids were present. This was believed to be at least partially accounted for by the distribution of THC in the cigarette. More destruction occurred when the THC was evenly distributed in the cigarette than when it was present in a well-defined lump.

SET AND SETTING

A most important variable encountered when evaluating the effect of marihuana is the interaction of the drug with the non-drug factors, set and setting. Set refers to the drug-taker's biological make-up including personality, past drug experiences, personal expectations of drug effect, and mood at the time of the drug experience. Setting refers to the external surroundings and social context in which the individual takes the drug. Set and setting exert their largest effect on psychoactive drugs, like marihuana, with subtle subjective mental effect and minimal physiological effect. Set and setting exert a variable but often marked influence on the potential drug effects (Waskow et al., 1970; Wickler, 1970).

The results of a series of experiments by Jones (1971) suggests the subjective state produced by "a socially relevant dose of smoked marihuana, . . . 9mg THC" is determined more by set and setting than by the THC content of the marihuana.

In one experiment, a greater variety and more intense pleasurable symptoms occurred in a four-man group allowing unstructured interpersonal interaction than in unstructured solitary test situations. Contrasting behavioral patterns were observed by the investigator and reported subjectively by the individuals. Subjects tested individually demonstrated a relaxed, slightly drowsy, undramatic state as they read, listened to the radio, or sat doing nothing. In the group setting there was elation, euphoria, uncontrolled laughter, a marked lack of sedation and much conversation. (Jones, 1971)

This strongly emphasizes the importance of setting in the marihuana experience. The reason is apparent why marihuana is usually used with other people. However, most investigators studying its effects evaluate their subjects alone in well-controlled, sterile, scientific laboratories.

The importance of the placebo effect (the subject experiences a drug effect from an inert material) to the "social high" obtained from marihuana was studied in another experiment (Jones and Stone, 1970; Jones, 1971). Misjudgments of the pharmacologic potency of both the smoked placebo (marihuana without THC) and active marihuana were commonly made by the subjects although physiologic and performance indices routinely matched the distinction correctly. The smoking of a material that smells and tastes like marihuana by individuals with marihuana experience appeared to produce a mental state that is interpreted as being high if combined with the expectation of becoming high.

The importance of learning to get high was demonstrated when individuals who smoked marihuana less than twice a month were compared with those who used marihuana at least seven times a week. Although both groups rated the active marihuana equally potent, the frequent users rated the placebo equally to the active drug, while the infrequent users experienced significantly less high from the placebo.

The infrequent users' experiences appears to reflect mainly pharmacologic factors with moderate set-setting influence. However, the frequent users' response to the placebo appears to reflect mainly learned set-setting influence and minimal pharmacologic factors. (Jones, 1971)

Smith and Mehl (1970) call learning to get high "reverse tolerance." During the early exposures to marihuana the individual learns to appreciate the subtle drug effect with repeated experience with the drug. Consequently, less drug may be required to experience the desired high in the early stages of marihuana use.

Further evidence for this is seen when the familiar smoking route and smell and taste cues are made ineffective by giving the active and inactive material by the oral route (Jones and Stone, 1970). Both groups of users can significantly distinguish the intoxication produced by 25mg of active material. But the frequent user rates this high significantly poorer than his smoking high while the infrequent user rates them correctly.

TOLERANCE

The development of tolerance is another important factor that may influence the psycho-

physiological effects of marihuana. Although tolerance occurs with many drugs and the process has been studied for over a century, the mechanism of this complex phenomenon is not completely known. Kalant et al., (1971) have extensively discussed tolerance to the psychotropic drugs.

Tolerance has two different connotations. The first, termed "initial tolerance," is an expression of the dose of the drug which the subject must receive at his first exposure to produce a designated degree of effect. These authors state that a variety of congenital and environmental factors contribute to the wide range of differences in "initial tolerance" observed among different individuals, sexes, species, age groups and so on.

The second meaning of tolerance is that of an "acquired change in tolerance" within the same individual as a result of repeated drug exposures so that an increased drug dose is required to produce the same specified degree of effect, or the same dose produces less effect. In this chapter, tolerance will be used synonymously with "acquired increase in tolerance."

Tolerance can only be discussed for each specific drug action and not for all the actions of a given drug on the body. That is, tolerance occurs at different rates for some of the various effects of the same drug on the body and may not occur for other effects of the same drug. The relationship between "initial tolerance" and "acquired change in tolerance" has not been clearly established.

✓ There are two classes of tolerance based on possible mechanisms. The first, dispositional tolerance refers to changes in absorption, distribution, excretion and metabolism which produce a reduction in the intensity and duration of contact between the drug and the target tissue on which it acts.

The second, functional tolerance includes changes in the properties and functions of the target tissue making it less sensitive to the same dose of the drug. Physiological tolerance implies a change in the target organ while psychological or "learned tolerance" implies the acquisition of new skills or functions to replace those changed in the target tissue (Kalant et al., 1971).

Considerable evidence is accumulating which demonstrates that tolerance does develop in numerous animal species (pigeons, rats, dogs, monkeys, chimpanzees, mice) to the behavioral and physiological effects of marihuana and THC in doses many times larger (from 1 mg. to 500 mg./kg/day) than the minimal active dose (Carlini, 1968; Silva et al., 1968; McMillan et al., 1970, 1971; Frankenheim et al., 1971; Carlini et al., 1970; Thompson et al., 1971; Pirch et al., 1972; Ferraro, 1971; Elsmore, 1970; Cole et al., 1971).

Lipparini et al. (1969) were not able to demonstrate tolerance in the rabbit.

Tolerance appears to develop rapidly to high doses even when injections are spaced up to about a week apart. Tolerance to high doses appears to be long-lasting with little loss of tolerance even after a month. But at low doses in the behavioral range, tolerance appears to completely dissipate in a few days after a single dose. The magnitude of tolerance development can be large. After repeated exposure, a dose of over one hundred times the original produces little effect (McMillan et al., 1971).

The development of tolerance to THC in animals occurs for some effects but not for others (McMillan et al., 1971; Pirch et al., 1972; Thompson et al., 1971). This differential development of tolerance may explain why tolerance to certain effects studied has not been demonstrated (Masur and Khazan, 1970; McMillan et al., 1971; Barry and Kubena, 1971; Kubena et al., 1971).

Lomax (1971) and Thompson et al. (1971) have noted that the development of tolerance to one effect of the drug (hypothermia or sedation) may allow the expression of the opposite effect (hyperthermia or stimulation) to which tolerance does not develop.

Cross tolerance has been demonstrated between delta-9-THC, delta-8-THC and its synthetic analogues. Cross tolerance has not been demonstrated between THC and lyseric acid diethylamide (LSD), mescaline or morphine (McMillan et al., 1970).

Preliminary work performed by McIsaac (1971) and Harris et al., (1972) demonstrated a reduction in the duration and quality of response on a conditioned learning task by monkeys on the second intravenously administered dose of THC. Tolerance developed extremely rapidly so that no effect on behavior was seen after five days. After a two-week period without THC, the animals were retested and the same degree of tolerance had persisted. The researchers believe these observations might indicate a rapid behavioral adaption or "learned" functional tolerance.

However, evidence indicates that dispositional tolerance and/or physiological type of functional tolerance also plays a role at least at higher doses. Tolerance develops to the central nervous system depressant effects, hypothermia hypopnea (Thompson et al., 1971) and the EEG effects (Pirch et al., 1971) of the drug. McMillan et al., (1971) have demonstrated that tolerance to the effects of THC on behavior can be blocked by the hepatic microsomal enzyme inhibitor, SKF-525-A which has been shown to be a potent inhibitor of THC metabolism (Dingell et al., 1971). Methodo-

logical techniques must be developed which will allow microdistribution studies to be performed in tolerant animals with low doses of THC before the mechanism of tolerance development can be clarified.

Evidence for the development of marked tolerance by man has been suggested by studies of heavy daily very long term users of hashish, charas or ganja in foreign countries. Reports from the Eastern literature (Chopra and Chopra, 1939; Dhunjibhoy, 1930; Ewans, 1904) and more recently from Greece (Miras, 1965; Fink et al., 1971) and Afghanistan (Weiss, 1971) relate daily consumption of enormous quantities of potent cannabis preparation estimated to contain up to about one gram of THC per day.

Weiss (1971) has noted that daily charas smokers start with small doses and then in order to achieve the same effect gradually increase their daily dose about 5-6 times over a 20 to 30 year period. Generally, most reach their maximum dose by age 40 and then gradually decrease their daily dose by 50% usually ceasing use by their 60's. Some smokers have been noted to raise their original daily dose up to a maximum of 10 times within the first two years.

Others have noted that moderate use for many years does not necessitate increased doses (Sigg, 1963).

At least part of the increase in daily amount of drug used is accounted for by the finding that the duration of the intoxication becomes shorter over the years so that the very heavy smoker must consume the drug more frequently to remain intoxicated. Additionally, smokers report that they have on occasion discontinued use for days or months after which they experienced similar effects at smaller doses (Weiss, 1971).

Fink et al. (1971) noted that as hashish users total daily dose was decreased by more than half over the years, the frequency of use per day declined correspondingly.

Rubin and Comitas (1972) noted that very long term Jamaican ganja smokers generally consumed an average of seven spliffs daily (a ganja cigarette several times the size of an American marijuana cigarette) with a maximum of 24.

Further evidence for the development of tolerance, at least to certain of the depressant effects, is that these very long term smokers apparently tolerate the extremely high doses well without dysphoria or decreased ability to perform their usual activities (Weiss, 1971; Fink et al., 1971; Rubin and Comitas, 1972).

Smith and Mehl (1970) noted the accumulating American anecdotal evidence of mild tolerance development after heavy daily use for a number

of years. Jones (1971) and Meyer et al. (1971) have suggested diminished effect on physiologic and psychomotor performance, that is, little or no impairment of function in daily users compared with infrequent, intermittent users of marihuana. Additionally, several investigators have noted that frequent users had little or no impairment on psychomotor performance tasks while marihuana-naïve individuals given the same dose had impaired function. (Clark et al., 1968, 1970; Jones and Stone, 1970; Mayor's Committee, 1944; Weil et al., 1968).

Subsequently (Mendelson et al., 1972) repetitive daily (free access) use over a 21-day period by groups of long-term intermittent (average 7.7 sessions per month) and moderate marihuana users (daily average, 33 smoking sessions per month) was studied. The development of tolerance was strongly suggested to the physiological pulse rate and general depressant effect on activity as well as psychological effects which impair recent memory, time estimation and psychomotor coordination.

No tolerance development occurred to the subjective effects of marihuana for experienced users over the 21-day period (global "highness", somatic, perceptual, awareness, feeling, control, friendliness, ambivalence and altered thinking). Furthermore, with the exception of a higher ambivalence rating for the daily user group, there were no differences in the subjective reports of the daily users or intermittent users. (Mendelson et al., 1972). The ambivalence score is believed (Katz et al., 1968) to be the best measure of "psychedelic effects" of hallucinogenic drugs.

In a prior study (Meyer et al., 1971) found that while the heavy smokers experienced more profound subjective effects soon after smoking, they were less intoxicated than the intermittent users one hour later.

These findings suggest to the investigators that the quality of the "high" may be different for heavy and intermittent users and may change with heavy use. Tolerance to the subjective effects of marihuana may occur predominantly to the depressant effects so that the stimulatory effects (or hallucinatory-like) would be predominant in the heavy users. The intermittent users who smoked marihuana several times daily in the current study showed no increase in the ambivalence rating.

The increased daily frequency of marihuana use by both groups over time by shortening the interval between smoking sessions appears consistent with earlier observations (Meyer et al., 1971) that the duration of the desired "high" is shorter in heavy users than in intermittent users.

Fink et al. (1971) confirmed several of these findings in a study in which intermittent users

smoked a fixed dose (14 mg. of THC) of marihuana. They noted a suggestion of development of tolerance to pulse rate, short-term memory, digit symbol substitution but not to the subjective high or EEG changes. However, the subjects did feel that the duration of the intoxication shortened progressively during the second half of the experiment.

Schuster and Renault (1971) administered twice daily fixed doses of marihuana (smoke from 430 mg. of marihuana with 1.5% THC content) to intermittent users over a 10-day period. A peak tachycardia of 20 to 30 beats per minute and a usual social high were produced. Preliminary observations revealed the development of tolerance to time estimation in a few days, but no evidence for tolerance to the tachycardia orthostatic blood pressure, or rating of the high.

Hollister (1971), in preliminary studies found no significant evidence of tolerance after five daily oral doses of 20 mg. of THC. Clinical responses measured were subjective judgment of the high, mood, pulse rate, reading comprehension or excretion of urinary metabolites.

REVERSE TOLERANCE

Smith and Mehl's (1970) clinical observations of many marihuana smokers suggest a J-shaped time curve of tolerance to marihuana. A novice marihuana smoker often reports feeling no high or requiring considerably more drug to get high on his first few trials with the drug than after he obtains more experience with the drug. This phenomenon has been called "reverse tolerance." These clinicians believed this represented "learning to get high" or acquiring the ability to appreciate or become sensitive to the subtle aspects of the intoxication.

Goode (1971) found that more frequent and longer term marihuana smokers tend to require fewer "joints" to get high but differences were not statistically significant.

Weil et al. (1968) reported that experienced users of marihuana achieved a "high" after being given the same dose as naïve (non-users) persons who did not experience a high but did demonstrate objective physiologic and psychomotor drug effects.

Meyer et al. (1971) found that heavy marihuana users (daily for three years) were most sensitive to the "high" and required less marihuana to achieve a social high than infrequent intermittent users (use one to four times per month for less than two years).

Phillips et al. (1971) reported an increase in severity of symptoms after repeated administra-

tion of THC to rats. This "sensitization" may be a correlate of reverse tolerance.

Lemberger et al. (1971) supplied additional evidence for reverse tolerance based on the intravenous administration of 0.5 mg of THC to experimental subjects. Naive subjects experienced no effect from this small dose. However, daily marihuana users, who were told they were receiving a non-pharmacologically active dose of THC, reported a "marihuana high" which lasted up to 90 minutes.

Lemberger et al. (1971, 1972) and Mechoulam (1970) suggested the possibility that enzymes necessary to convert THC to a more active compound require prior use of marihuana.

Reverse tolerance appears to be a complex phenomenon. Jones (1971) presented evidence which stressed the importance of expectation, setting and prior drug experience on learning to get "high." As the user gains more experience with marihuana, the more the individual's mind is able to respond to the expectation of the "high" by actually becoming high when given an inert material which smells and looks like marihuana.

Weil (1971) believes that the capacity to get "high" is an inherent characteristic of each individual's mind. He believes that marihuana facilitates the user's ability to achieve this altered state of consciousness, that is, learn how to get high.

Mendelson et al. (1972) did not find evidence for reverse tolerance. In fact, the daily users were more likely than the intermittent users to smoke two cigarettes per occasion. Both groups had had an average of five years of marihuana use. Several other investigators did not obtain any evidence of reverse tolerance after repetitive daily use in experienced subjects (Hollister, 1971; Schuster and Renault, 1971; Fink et al., 1971).

METABOLISM

Metabolism of the drug by the body exerts an important influence on the psychopharmacologic effect of marihuana. Many laboratories in many countries have been examining the metabolism of the cannabinoids using *in vitro* liver microsomal enzyme preparations.

With the recent availability of radiolabeled Δ^9 and Δ^8 THC, cannabinol and cannabidiol much activity has occurred *in vivo* in animals. A comprehensive review of these areas including studies of absorption, disposition, excretion, metabolism and stimulation-inhibition of metabolism is beyond the scope of this report. Readers interested in further details in this area are referred to an excellent comprehensive review by Lemberger (1972).

From animal and *in vitro* studies it appears that the liver rapidly changes Δ^9 and Δ^8 THC in a similar manner by hydroxylation to 11-OH THC. This compound appears to be as potent or possibly more potent pharmacologically than the parent compound. This metabolite appears to be rapidly hydroxylated to 8-11 dihydroxy Δ^9 THC (7-11 dihydroxy Δ^8 THC) which is inactive. The 8-OH Δ^9 THC appears to be a minor active metabolite (Christensen et al., 1971; Burstein et al., 1970; Ben-Zvi et al., 1970; Foltz et al., 1970; Wall et al., 1970, 71; Nilsson et al., 1970).

These metabolites are excreted primarily into the bile and then to the feces. Some evidence exists for an enterohepatic circulation returning the drug to the blood. (Miras and Coutselinis, 1970; Klausner and Dingell, 1971)

Another metabolic pathway appears to be present resulting in a series of acidic metabolites excreted primarily in the urine (Agurell et al., 1970). Recently, Burstein and Rosenfeld (1971) isolated and identified a major rabbit urinary metabolite, 11-carboxy-2'-hydroxy- Δ^9 THC. They postulate that other acidic metabolites might be esters or amides of this compound (Figure 7).

Recently, Nakazawa and Costa (1971) demonstrated that Δ^9 THC was metabolized by lung microsomes forming two unidentified products not found in liver homogenates.

Lemberger et al. (1970, 1971, 1972) and Galanter et al. (1972) have performed metabolic studies in man using intravenous, oral and smoked Δ^9 THC. These studies indicate that the THC disappears from the plasma in two phases.

The initial rapid phase has two components and represents metabolism by the liver and redistribution from the blood to the tissues. The slower second phase represents tissue retention and slow release and subsequent metabolism.

The plasma $\frac{1}{2}$ life of THC was significantly shorter in daily users than non-users at both the first component of phase one (10 minutes versus 13 minutes) and phase two (27 hours versus 56 hours). Tissue distribution was similar in daily and non-user ($\frac{1}{2}$ life 2 hours).

Therefore, immediate metabolism of THC and subsequent metabolism is more rapid for daily user than the non-user implying specific enzyme induction. THC persists in the plasma for a considerable period of time, at least three days, with a half life of 57 hours for non-users and 28 hours for daily users.

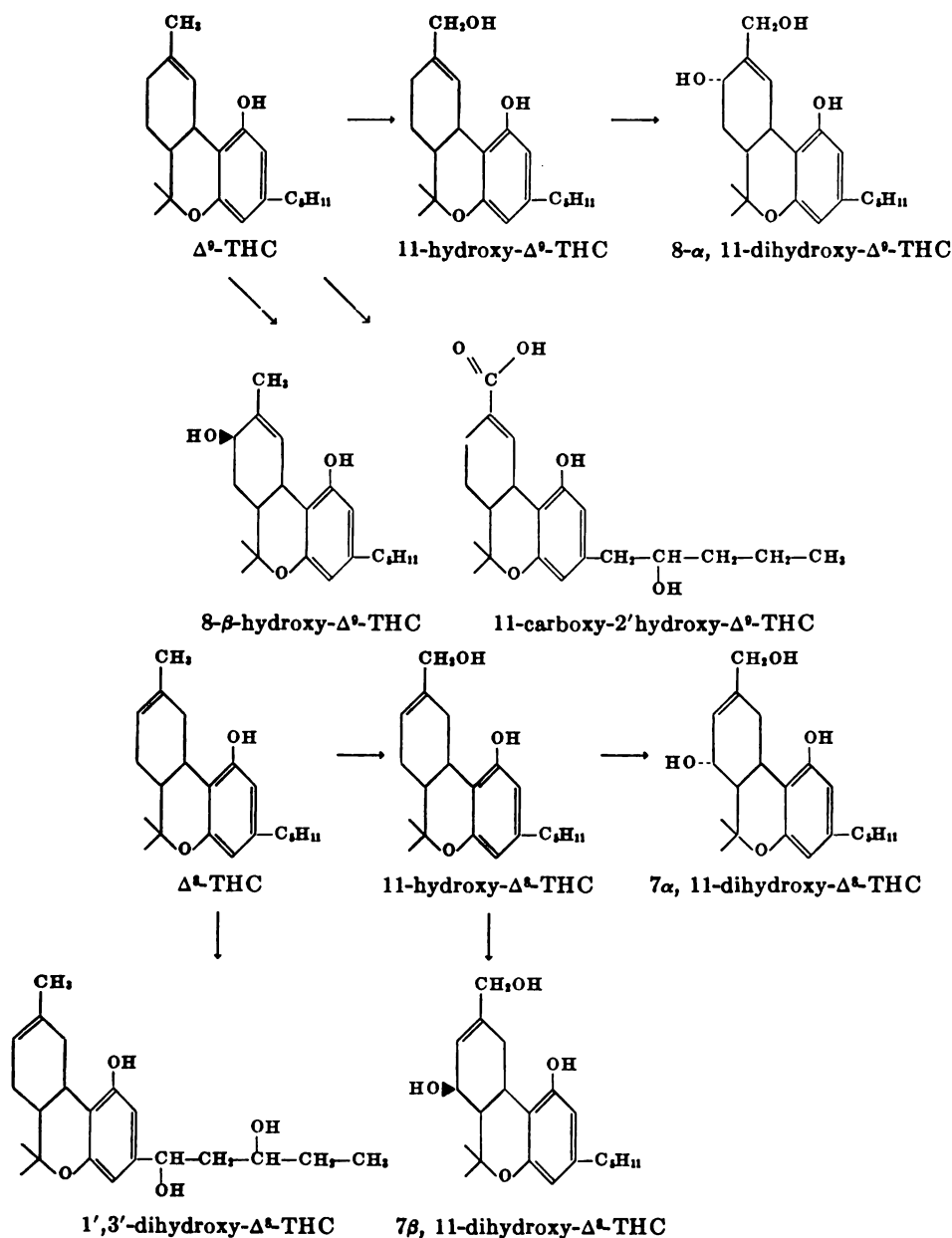
The presence of 11-hydroxy THC and more polar metabolites in the plasma of both users and non-users within 10 minutes indicates that the

metabolite probably accounts for the pharmacological activity of marijuana, not THC.

Further metabolism of the 11-hydroxy THC to more polar inactive 8-11 dihydroxy Δ^9 THC metabolite occurs more rapidly in users than non-users. During the first few hours after injection, unchanged THC, its polar metabolites and non-polar metabolites in the plasma, decline rapidly and then level off as they are distributed to the tissues. THC persists in the plasma for at least three days, and both users and non-users excrete metabolites in the urine and feces for more than a week.

Delta-9-THC is extensively metabolized to more polar compounds which were excreted in the urine and feces. Urinary excretion and biliary excretion (reflected a day later in the feces) was greatest during the initial 24 hours, then gradually tapered off. All THC is metabolized since no unchanged THC was excreted in the feces or urine. No difference in total cumulative excretion was observed but a significantly larger percentage of the metabolites were excreted in the urine of users than non-users. About 40-45% of the metabolites were collected in the feces in both groups in one week. Urinary excretion in this period accounted for

FIGURE 7.—Metabolism of THC



30% in daily users and 22% in non-users. (Lemberger et al., 1970, 1971, 1972)

Perez-Reyes et al. (1971) found a similar pattern of excretion of metabolites after oral administration.

Urine contained no Δ^9 THC, only a small quantity (3%) of 11-hydroxy THC and 90% more polar acidic compounds as yet unidentified. (Lemberger, 1971). Preliminary studies by Burstein and Rosenfeld (1971) suggest that these human acidic urinary metabolites are identical to the 11-carboxy-2' hydroxy THC found in rabbits.

In man, Lemberger et al. (1971, 1972) found that 11-OH THC and 8-11-OH THC were primarily excreted in the feces. Twenty-two percent of the metabolites in the feces were unchanged 11-hydroxy THC and slightly less were 8-11-dihydroxy THC. The remainder were unidentified more polar compounds, perhaps conjugates of these metabolites.

All user subjects (Lemberger et al., 1970, 1971, 1972) but no non-user noted a high after intravenous injection of the 0.5 mg dose of Δ^9 THC. This would be a dose range of 5 to 7 micrograms/kg. Highs have been noted by Kiplinger et al. (1971) with smoking THC to deliver a dose of 6.25 micrograms/kg. The high for some lasted up to 90 minutes. Thus, the plasma levels of Δ^9 THC and its metabolites seen after intravenous injection suggest that psychopharmacologic effects are seen in the first component of the rapid phase and terminated by redistribution and metabolism after the initial phase. The 11-hydroxy Δ^9 THC would be present at this early phase and is probably responsible for the activity of Δ^9 THC in marihuana.

Further evidence that the 11-OH Δ^9 THC is responsible for marihuana's effect was seen in oral and inhalation studies. By the oral route, blood levels of unchanged THC were relatively low compared to the radioactivity levels of the metabolic products at the time of peak subjective effect. While the blood level of unchanged THC at the peak oral effect was identical to that after intravenous injection of the 0.5 mg. dose, the psychologic effect was much more pronounced after oral administration of the larger 20 mg. dose of THC. Again after inhalation, the plasma levels of the metabolites correlate temporally with the subjective effects but the plasma levels of unchanged Δ^9 THC do not. (Lemberger, 1970, 1971, 1972; Galanter, 1972)

PATTERN OF USE

The drug effect of marihuana can only be realistically discussed within the context of who the user is, how long he has used, how much and how

frequently he uses and what is the social context of the use. In general, for virtually any drug the heavier the use pattern, that is the longer the duration, the more frequently the use and the larger the quantity used on each occasion, the greater the risk for either direct or indirect damage.

Tolerance development is only one of a variety of occurrences which are related to the repetitive use of marihuana. Any discussion of drug effect must take into account the time period over which the drug is used (duration of use). This is necessary in order to detect cumulative effects or more subtle gradually-occurring changes. Of course, the issue of causality is quite complex because of the multitude of factors other than marihuana use that have a direct or indirect effect on the individual over a period of years.

For the purposes of this report, *immediate* or acute effects will refer to those drug effects which occur during the drug intoxication or shortly following it. *Short-term* or sub-acute will arbitrarily refer to periods of less than two years; *long-term*, from two to 10 years; and *very long term* (or chronic), greater than 10 years.

Frequency of use will arbitrarily be designated in the following manner: *experimental* use refers to use of marihuana at least one time but not more than once a month; *intermittent* use refers to use more than once a month but not more than 10 times a month (several times a week); *moderate* use refers to use of the drug more than 10 times a month but not more than once a day; *heavy* use designates use more than once daily and *very heavy* use refers to use many times a day, usually with potent preparations (high THC content), producing almost continual intoxication so that the smoker's brain is rarely drug free.

AMOUNT OF DRUG CONSUMED

Relatively little actual data are available on the amount of marihuana smoked per occasion or per day by current users in the United States. (McGlothlin, 1971, 1972). Estimates of the quantity of THC consumed are difficult because of the variability of potency as well as weight and size of the marihuana cigarette ("joint") and the degree of cleaning of stems and seeds from the dried leaves ("manicuring").

The analytic data available indicates most of the marihuana used in the United States is of Mexican origin and averages about 1% THC per dry cleaned weight of marihuana (Lerner and Zeffert, 1968; Jones, 1971). Subjective ratings by experienced marihuana users appear to substantiate the data that marihuana containing 1% THC is of

average quality (Jones and Stone, 1970; Weil et al., 1968).

Marihuana cigarettes are estimated (McGlothlin, 1971, 1972) to average about 0.5 g in weight and, therefore, contain about 5 mg of THC. Cigarettes used in the eastern states are generally smaller than those rolled in the west (McGlothlin, 1971; New York Police Department, 1969, 1970).

Most data indicates that for the large majority of users one-half to one cigarette (2.5 to 5 mg THC) is sufficient to "get high" in intermittent-moderate users, although often two or more cigarettes were smoked to achieve additional effect (Nisbet and Vakil, 1972; Shean and Fechtmann, 1971; McGlothlin et al., 1970; McGlothlin, 1972; Jones, 1971; Goode, 1970).

Current American daily users appear to consume one to two cigarettes per occasion (Jones, 1971) although some users estimate they smoke three to five cigarettes per occasion (McGlothlin et al., 1970). Goode (1971), however, found practically no relationship between amount required to get high and frequency of use (daily to less than monthly) or duration of use (less than two years to six or more years). In fact, the heavy and longer term users were less likely to require more "joints."

Thus, the estimated 15 mg THC for current daily users is about one-half that estimated for confirmed regular users 30 years ago in the United States (Mayor's Committee, 1944; Charen and Perelman, 1946) and one-third to one-fourth the median daily consumption of daily users in North Africa and India.

The maximum daily consumption of 10 cigarettes (50 mg THC) for current heavy U.S. marihuana smokers (Jones, 1971; McGlothlin, 1972) is about the same as the average amount consumed by daily chronic users in other countries, and about one-fourth or less of the maximum in these countries (Soueif, 1967; Sigg, 1963; Indian Hemp Drug Commission's Report, 1893-1894; Chopra, 1940; Chopra and Chopra, 1939).

Studies of American military in Vietnam (U.S. Congress, 1971; Colbach and Crowe, 1970; Forrest, 1970), and Germany (Tennant et al., 1971) described the daily use of quantities of hashish or potent marihuana comparable to amounts consumed by regular chronic users in other countries.

Experimental data appear to confirm these estimates of quantity of THC consumed. Isbell et al. (1967) and Jones (1971) found that most subjects reported a normal "high" after smoking 5-10 mg of THC. Meyer et al. (1971) found that a "very high" state was attained by *ad libitum* smoking of 3.12 mg THC by daily users and 3.78 mg THC by intermittent users.

In experiments by Johnson and Domino (1971), subjects were urged to smoke until they were as high as they had ever been on marihuana and felt they could not smoke any more. These subjects smoked from one to four cigarettes containing 8.7 mg of THC to reach this level of intoxication. The range was from 8.7 to 30 mg of THC with a mean of about 20 mg THC.

Intermittent and daily users were allowed to smoke marihuana on a free choice basis over a 21-day period in studies by Mendelson et al. (1972). Each cigarette contained one gram of marihuana of approximately 2% THC content, or about 20 mg of THC.

Subjects were asked to rate their high on a 10 point scale with 10 corresponding to highest ever; five as moderately high and zero, no effect. Ratings for the daily user group ranged from zero to nine with an average of about six for all cigarettes rated. Individual means ranged from three to about seven. On almost all occasions, subjects in both groups smoked the entire cigarette.

Kiplinger et al. (1971) and Lemberger, et al. (1971) noted that daily long-term users were able to detect effects of the "high" at doses calculated to deliver as low as 5-7 micrograms/kg THC (equivalent to smoking about 100 mgs. of marihuana containing 1% THC). Perhaps this explains the finding that many users are able to "get high" smoking U.S. wild-growing marihuana containing from near zero to 0.5% THC (Lerner, 1969; Phillips et al., 1970; Fetterman et al., 1971).

Several *ad libitum* experiments were performed with marihuana of unknown composition (Williams et al., 1946; Siler et al., 1933) using "confirmed regular marihuana users" confined over a 39 and six-day period. The users, who generally consumed three cigarettes per day, under these rather artificial conditions of the experiment consumed means of 17 (range nine to 26) and five (range one to 20) cigarettes per day respectively.

Miras and Coutsilinis (1970) reported recent experimental data on chronic Greek hashish users who routinely use single smoked doses of hashish containing 100 mg of THC. Under *ad libitum* conditions, these users averaged 150-350 mg of THC per day over a 30-day period.

The subjects studied during a 21-day period of free choice marihuana consumption by Mendelson et al. (1972) generally consumed all of one cigarette containing 20 mg of THC per smoking session. The subjects who were previously daily users were more likely during the experiment to consume more than one cigarette per session than the previously intermittent users.

Individual consumption by the intermittent users ranged from an average of about one-half to

six cigarettes per day (group mean three) while the daily users consumed an average of three-and-a-half to nine cigarettes per day (group mean six-and-a-half). Reasons given by the subjects for the dramatic shift in the frequency of marihuana use included boredom, testing the limits of their endurance, demonstrating its harmlessness to the research staff, and subtle social pressure.

DURATION OF USE

Very little American data exists on the duration of marihuana use. Practically no data exists which demonstrates the extent that persons who initiated marihuana use some 20-40 years ago have continued its use. Robins and Murphy (1967) in a follow-up study of St. Louis black males noted that 20% of those who had tried marihuana by age 24 were still using it to some degree 15 years later. McGlothlin et al. (1970, 1971) reported on a sample of predominantly white adults who began using marihuana in adolescence and had continued infrequent use for more than 20 years.

In the case of Western and particularly middle class American use of marihuana, the rapid climb to prominence of the phenomenon since the mid-sixties raises the question of whether the entire drug movement is transient or permanent. Certainly, the majority of the youthful users and many of the adults have used the drug less than 10 years and probably less than five years.

One 1970 survey (Lipp, 1970) revealed that 77% of those students who initiated marihuana use four to five years earlier were still using it to some degree. A recent study (Walters et al., 1972) indicates that students who first used marihuana before entering college in September 1965 and had continued use of marihuana in February 1969 ("old user") differed from the vast majority of users who began their drug use in college ("new user").

The old user is more likely to experiment with a wide variety of drugs, to be extremely active in radical political organizations, to be alienated from American society, to be less definite about career plans, and to have more heterosexual activities.

The Commission-sponsored National Survey indicated that marihuana use by both youth (12-17 years of age) and adults (18 and over) is experimental in approximately 75% of those who have ever used marihuana. These individuals have either stopped using it (66% of adults and 57% of youth) or are using it once a month or less. In contrast, 13% of the ever user subsample (12% adults, 16% youth) use marihuana once a week or more.

In other non-Western countries, cannabis use frequently persists for long periods. Especially in the East, persons using it for 20-40 years or more are not uncommon. In other cultures, initiation is most common in adolescence. Once the habit is established it is likely to continue on a daily basis for many years and frequently continues as a lifetime practice (Weiss, 1971; Sigg, 1963; Soueif, 1967; Watt, 1936; Chopra and Chopra, 1939; Bouquet, 1951; UN, 1957).

Probably the duration of use will vary considerably depending on cultural acceptance or rejection (McGlothlin, 1972).

INTERACTION WITH OTHER DRUGS

Little experimental work has been done on the interaction between marihuana and other drugs used socially or medically although this will become an important area as usage increases.

Marihuana is often used with sweet wines to enhance its effect. Some evidence for an additive effect of marihuana and alcohol on motor and mental performance and subjective effect has been seen experimentally (Manno et al., 1971; Jones and Stone, 1970). Some degree of additive effects would be expected with barbiturates based on their similarity to alcohol. A more complex, mixed pattern of effect might be expected with amphetamines and hallucinogens. These latter combinations are rarely used socially (Hollister, 1971).

Acute Effects of Marihuana (Δ^9 THC)

SUBJECTIVE EFFECTS

Descriptive accounts of marihuana intoxication have been written by noted authors, Beaudelaire (1961), scientists, Moreau (1945), and common users (Tart, 1970, 1971; Isbell et al., 1967; Report by Advisory Committee, 1968). Adequate description of the state of mind produced by low doses is difficult because it is not approximated in the usual states of consciousness or by other commonly used drugs. The closest non-drug approximation may be the altered state of consciousness experienced in the hypnotic trance or transcendental meditation or the transition zone between waking and sleep (Weil, 1971). Due to the highly subjective nature of the experience, there is much individual variation in the effects described.

Tart (1970, 1971) studied the range of potential common effects in an extensive survey of 150 users. Changes noted by these studies at low doses (usually smoked dose about five mg. THC) include euphoria with restlessness and mild mental confusion. Sensory perception of the external environ-

ment is altered. Users often perceive an overestimation or slowing of elapsed time and expansion of space, enhanced sense of tactile, olfactory, gustatory perceptions and often a feeling of hunger. Visual alterations reported are more vivid imagery and seeing forms and patterns in objects that are usually amorphous. Increased awareness of subtle qualities of sound such as purity, distinctness or rhythm are characteristically perceived by users. A dreamy, relaxed state and disinhibition, with uncontrollable laughter is reported and users often believe that interpersonal relations are altered, and act to potentiate social interaction.

At moderate doses intensifications of changes experienced are reported. Users' reports include disturbed associations, dulling of attention, vivid visual imagery, fixed ideas, rapidly changing positive and negative emotions, fragmentation of thought, flight of ideas, impaired immediate memory, altered sense of identity, increased suggestibility and a feeling of enhanced insight. At higher doses, interpersonal relations are dulled and the user feels less social and more withdrawn.

At larger doses psychotomimetic (hallucinogenic-like) phenomena are experienced in a wave-like fashion. These include distortion of body image, depersonalization, visual illusions and distortions, synesthesia, dream-like fantasies and vivid hallucinations.

Data from Isbell et al. (1967) and Perez-Reyes et al. (1971) have indicated that the hallucinogenic oral dose is in the range of 0.4 to 0.5 mg./kg Δ^9 THC. Thus, the hallucinogenic dose is 80 times larger than the delivered dose of smoked marihuana producing minimal subjective effects (five micrograms/kg.) or about 11 to 14 times larger than the usual smoked dose.

LETHALITY

There is no conclusive evidence that short-term marihuana use alone directly results in any physical damage to man. A few scattered fatalities associated with marihuana use are occasionally reported. Most are from 19th century Indian experiences with large oral doses of charas (Deakin, 1880; Bouquet, 1951; Ewens, 1904; Walton, 1938; Indian Hemp Drugs, 1893). Brill et al. (1970) and Smith (1968) have noted that there have not been any reliable reports of human fatalities attributable purely to marihuana, although very high doses have been administered by users.

A frequently cited recent report from Belgium by Heyndrickx et al. (1970) describes an essentially negative pathological and toxicological study of a 23-year-old man found dead in the presence of marihuana and hashish. A cannabinoid

was detected in his urine. However, this finding in no way inculpates marihuana as the responsible agent. There are many possible causes of sudden death which are not toxins and do not produce observable pathology; e.g. anaphylactic reactions, insulin shock, cardiac arrhythmias, etc.

A case report (Nahas, 1971) of an attempted suicide by smoking hashish, recently in France is even more anecdotal. An individual was reported to have smoked consecutively ten pipes of hashish containing approximately 200 mg of Δ^9 THC each before losing consciousness. But recovery occurred after supportive treatment.

Another case report (Hughes et al., 1970) relates severe diabetic coma with ketoacidosis after the ingestion of huge amounts of marihuana by a mental patient. However, it appears that the pronounced vomiting secondary to the marihuana ingestion caused a severe electrolyte imbalance and alkalosis. Possibly a vulnerable glucose-regulating system responded to the severe stress inappropriately. Retrospectively, there was no history of diabetes noted previously but this was not confirmed or ruled out by lab tests prior to the episode.

Several case reports (Henderson and Pugsley, 1968; King and Cowen, 1970; King et al., 1970; Lundberg et al., 1971; Gary and Keylon, 1970) noted acute severe physiological disturbances and acute collapse (shock, chills and fever) subsequent to intravenous injection of suspensions of marihuana. These symptoms may have been due to an allergic reaction to injected foreign plant material, to a bacteremia and/or to the injection of insoluble particles which are filtered by the organs. The symptoms may be considered a complication of the mode of use rather than results of the drug.

Although a median lethal dose has not been established in man (Brill et al., 1970), one has been found in laboratory animals. Earlier reports (Lowe, 1946; Joachimoglu, 1965) used materials of uncertain potency and composition. Recent studies utilized carefully quantified materials. One group, Phillips et al. (1971), utilizing THC extracted from marihuana, demonstrated the following LD₅₀ (the dose that causes death in 50% of the animals) in units of mg/kg of Δ^9 THC from mice/rats: oral 481.9/666, intraperitoneal 454.9/372.9, intravenous 28.6/42.47.

Thompson et al. (1971) under contract to the National Institute of Mental Health have recently carried out extensive studies in rats, dogs and monkeys in order to define the range of toxicity of the drug. The group used synthetic Δ^9 and Δ^8 THC and a crude marihuana extract (CME) of carefully defined composition. Δ^9 THC was more

potent than Δ^9 THC. CME was less potent than a similar quantity of Δ^9 THC.

Acute toxicity was studied using intravenous, intraperitoneal and oral routes of administration in rats. An LD50 similar to that reported by Phillips et al. (1971) was found by the intravenous route (20 mg/kg of THC) and intraperitoneal route (400 mg/kg) but higher values were noted with oral administration (1140 mg/kg). Interestingly, the LD50 for males was 1400 mg/kg while for females it was 700 mg/kg by the oral route. The minimal lethal dose orally was between 225 and 450 mg/kg.

An LD50 was not attainable in monkeys and dogs by the oral route. Enormous dose levels (over 3000 mg/kg of Δ^9 THC) were administered without lethality to most animals. A dose of about 1000 mg/kg THC was the lowest dose which caused death in any animal. The completeness of intestinal absorption of THC at these high doses is unknown. Behavioral changes in the survivors included sedation, huddled posture, muscle tremors, hypersensitivity to sound and hypermobility.

The cause of death in the rats and mice subsequent to oral THC was profound central nervous system depression leading to dyspnea, prostration, weight loss, loss of righting reflex, ataxia, and severe fall in body temperature which led to cessation of respiration from 10 to 46 hours after single dose oral administration. No consistent pathological changes were observed in any organs. The cause of death when it rarely occurred in the higher species did not appear to be related to the same mechanism as in the rats.

Using intravenous administration, the acute one dose LD50 for Δ^9 THC was 100 mg/kg in dogs and 15.6 to 62.5 mg/kg in monkeys depending on concentration of the solution. The minimal lethal intravenous dose for dogs, also depending upon concentration, was 25 to 99 mg/kg and for monkeys 3.9 to 15.5 mg/kg.

In contrast to the delayed death observed in rats after oral administration, lethality in rats, dogs and monkeys after intravenous injection occurred within minutes after injection. When sublethal amounts were injected, central nervous system depression with concomitant behavioral changes similar to those observed after oral doses were observed. However, their onset was more rapid and the intensity of effect more severe with anaesthesia and convulsions noted after injection. The monkeys and dogs that survived the intravenous injection of THC recovered completely within five to nine days.

The only consistent pathological changes were noted in the animals which succumbed. Pulmonary changes including hemorrhage, edema, emphysema

and generalized congestion were found and death resulted from respiratory arrest and subsequent cardiac failure. The investigators presumed one mechanism possibly accounting for these findings was due to the concentration of the THC solution and its insolubility in water. Presumably, when these highly concentrated solutions mixed with the blood, the THC precipitated out of solution. The precipitated foreign material then formed aggregates (or emboli) that were filtered out in the lung capillaries causing a physical blockage of pulmonary blood flow.

Subsequently, intravenous studies were repeated using Δ^9 THC emulsified in a sesame oil-Tween 80-saline vehicle at 15 mg/ml or 40 mg/ml. The emulsions were administered at a uniform rate of 2 ml/15 sec. Doses administered were 1, 4, 16, 64, 92, 128, 192 and 256 mg/kg. All monkeys injected with 92 mg/kg or less survived and completely recovered from all effects with two to four days. All monkeys injected with 128 mg/kg or more succumbed within 30 minutes for all but one (180 minutes).

Histopathological changes found in the lungs of the deceased monkeys were like those described after the previous intravenous experiment. All the monkeys that died exhibited severe respiratory depression and bradycardia within five minutes after the injection. Respiratory arrest and subsequent cardiac failure occurred within minutes. Behavioral changes preceding death were salivation, prostration, coma and tremors.

Behavioral and physiological changes described clinically in the surviving monkeys followed a consistent developmental sequence and were roughly dose related in severity and duration. Onset was 15 minutes following injection and duration was up to 48 hours. Huddled posture and lethargy were the most persistent changes. Constipation, anorexia and weight loss were noted. Hypothermia, bradycardia and decreased respiratory rate generally were maximal two to six hours post injection. Tremors with motion but not at rest were believed to be caused by peripheral muscle inadequacy.

In summary, enormous doses of Δ^9 THC, Δ^8 THC and concentrated marijuana extract ingested by mouth were unable to produce death or organ pathology in large mammals but did produce fatalities in smaller rodents due to profound central nervous system depression.

The non-fatal consumption of 3000 mg/kg Δ^9 THC by the dog and monkey would be comparable to a 154-pound human eating approximately 46 pounds (21 kilograms) of 1%-marijuana or 10 pounds of 5%-hashish at one time. In addition, 92 mg/kg THC intravenously produced no fatalities in monkeys. These doses would be comparable

to a 154-pound human smoking at one time almost three pounds (1.28 kg) of 1%-marihuana or 250,000 times the usual smoked dose and over a million times the minimal effective dose assuming 50% destruction of the THC by smoking.

Thus, evidence from animal studies and human case reports appears to indicate that the ratio of lethal dose to effective dose is quite large. This ratio is much more favorable than that of many other common psychoactive agents including alcohol and barbiturates (Phillips et al. 1971, Brill et al. 1970).

PHYSIOLOGICAL EFFECTS

Much research has been reported on the effect of single doses of marihuana or THC on a wide variety of indices of physiologic function in animals. Most animal studies involved large doses and produced profound changes similar in nature but less in magnitude than those described in the previous paragraphs. These have been comprehensively reviewed elsewhere (Secretary HEW 1972, Forney, 1971; Secretary HEW, 1971) and should be consulted if more detailed information is required.

Similarly, much research has been done in man. As discussed in the previous section on factors influencing the psychopharmacological effect in man, an acute dose-response relationship has been clearly defined over a dose range relevant to human usage patterns for these effects. Thus, with increasing dose, the larger the effect on the index being observed and the longer the effect persists. However, there is a wide variation between individuals' responses but each individual is quite consistent.

The most consistent physiological sign is an increased pulse rate (Mendelson et al., 1972; Johnson and Domino, 1971; Renault et al., 1971; Galanter et al., 1972; Domino, 1970; Hollister et al., 1968; Manno et al., 1970; Mayor's Committee, 1944; Waskow et al., 1970; Isbell and Jasinski, 1969; Meyer et al., 1971; Weil et al., 1968; Jones and Stone, 1970; Clark and Nakashima, 1968). This does not appear to be a direct drug effect on the heart (Manno et al., 1970). Instead, the drug appears to cause complex changes in the autonomic nerves regulating heart rate. Thus, Kiplinger et al. (1971) demonstrated that the increase produced by marihuana in heart rate is prevented by pretreatment with a Beta-sympathetic nervous system blocking agent, propranolol. A comparable increase rate was produced by treatment with isoproterenol, a Beta-sympathetic like drug. One subject developed an abnormal bigeminal rhythm after both marihuana and isoproterenol.

Renault et al. (1971) noted a consistent effect of marihuana on the cardiac rhythm which also produced an increased heart rate. The effect was the suppression of the normal sinus arrhythmia usually produced by respiration. Respiration usually produces a slowing of heart rate mediated by the vagal parasympathetic nerve supply. This depression of normal vagal tone was further evidenced by the absence of heart rate slowing during forced expiration against a closed glottis (Valsalva maneuver). This effect seemed to wax and wane over several minutes producing alternate periods of rapid and slowed heart rate.

Both autonomic nervous systems seem to be affected by marihuana; the sympathetic is stimulated while the parasympathetic is inhibited.

Kiplinger et al. (1971) clearly demonstrated that the amount of increase in pulse rate was directly related to the dose of THC administered as did Renault et al. (1971) and Johnson and Domino (1971) over a wide range of doses. Both experienced and inexperienced marihuana smokers demonstrated increases regardless of the subjective state described. Tachycardia is noted rapidly and reaches a peak about 15 to 20 minutes after finishing smoking. The pulse rate returns to normal within one to one-and-a-half hours.

Other than the one report of bigeminy (Kiplinger et al., 1971), little or no alteration of normal heart rhythm were noted by electrocardiogram (Isbell et al., 1967; Mayor's Committee, 1944) other than sinus tachycardia (Mendelson et al., 1972). Johnson and Domino (1971) noted premature ventricular contractions in a few of their subjects, but they felt this effect was more likely produced by the smoking itself rather than by the drug.

Conjunctival injection, reddening of the eyes due to increased prominence of the conjunctival blood vessel and dilation of the scleral vessels, (Hepler et al., 1971; Kiplinger, et al., 1971) is another highly consistent occurrence (Mendelson et al., 1972; Allentuck and Bowman, 1942; Ames, 1958; Hollister, et al., 1968; Isbell et al., 1967; Manno et al., 1970; Waskow et al., 1970; Weil et al., 1968) produced by orally ingested and smoked al., 1968). This finding is produced by orally ingested and smoked marihuana (or THC). And thus the effect must be a direct drug effect and not caused by irritation from smoke (Perez-Reyes and Lipton, 1971). Kiplinger et al. (1971) noted that this finding was dose-related although it develops slowly reaching a maximum about one hour after smoking.

Reported effects on blood pressure are inconsistent. Some investigators find lowered pressure (Hollister et al., 1968; Isbell et al., 1967; Waskow,

et al., 1970) while others report a slight increase (Johnson and Domino, 1971; Domino, 1970; Mayor's Committee, 1944) and still others report increases and decreases (Mendelson et al., 1972; Perez-Reyes et al., 1971).

Preliminary results of a carefully performed study of the cardiovascular effects (Weiss, 1971) demonstrated orthostatic hypotension in the erect position and hypertension when supine.

Little or no effect has been demonstrated in humans on a wide variety of parameters investigated. Body temperature is unchanged (Mendelson et al., 1971; Hollister et al., 1968; Isbell et al., 1967; Brooks, 1896) as is respiratory rate (Domino, 1970; Isbell et al., 1967; Weil et al., 1968), lung vital capacity and acute bronchospasm (Mendelson et al., 1972) and basal metabolism (Mayor's Committee, 1944).

Several studies (Mendelson et al., 1972; Mayor's Committee, 1944; Personal Communication, 1970) have examined changes in blood cells and blood chemistry. No acute effects were demonstrated on red blood cell number, or structure; differential and total white blood cell count; platelet count; reticulocyte count; serum electrolyte concentrations; calcium and phosphorous serum levels; liver function tests; uric acid concentration; type or quantity of serum proteins. Although increased frequency of urination is often reported, increased urine volume has not been demonstrated (Ames, 1958; Mayor's Committee, 1944) and no alteration of kidney function identified (Personal Communication, 1970; Hollister et al., 1968; Mayor's Committee, 1944; Mendelson et al., 1972).

Reports of increased hunger, especially for sweets (Allentuck and Bowman, 1942; Ames, 1958; Manno et al., 1970; Mayor's Committee, 1944), have focused attention on blood sugar and food intake. No consistent significant change in blood sugar has been demonstrated (Dornbush and Freedman, 1971; Hollister, 1971; Hollister et al., 1968; Isbell et al., 1967; Manno et al., 1970; Personal Communication, 1970; Weil et al., 1968) with some investigators finding decreases (Beringer et al., 1932; Lindemann, 1933-1934), others finding increases (Manno, 1970; Mayor's Committee, 1944), still others finding both increases and decreases (Miras, 1965).

Podolsky (1971) found that although fasting blood glucose was unchanged by smoking marijuana, higher 30 and 60 minute glucose levels were noted after a standard dose of glucose. No corresponding alteration in insulin or growth hormone levels was demonstrated.

Hollister and Gillespie (1970) found an increased total food intake when the drug was administered after breakfast but not after an over-

night fast. Half the subjects reported subjective increased hunger. Subjects' free fatty acid levels and blood glucose remained unchanged while the placebo controls' free fatty acid values decreased. Another study suggested increased appetite and food intake but was without adequate controls (Personal Communication, 1970).

An investigation of physiological parameters of stress after marijuana (Hollister, 1969; Hollister et al., 1970) revealed only a minimal increase in white blood cells and a minimal decrease in eosinophils but no changes in serotonin, cortisol level and urinary catecholamines. However, another investigator (Chopra, 1969) demonstrated increased catecholamine excretion especially those from the adrenal medulla.

Hepler and Frank (1971) and Frank et al. (1971) have carefully studied ophthalmological changes produced by marijuana. Swelling of the eyelids (Ames, 1958), ptosis (Isbell et al., 1967), photophobia and nystagmus (Allentuck and Bowman, 1942) and dilated, sluggish reacting pupils (Mayer-Gross et al., 1960; Mayor's Committee, 1944) were all mentioned in earlier discussions but were not demonstrated (Hepler et al., 1971).

Findings which were quantifiable (Hepler et al., 1971) were a slight pupillary constriction with normal responsiveness to light and accommodation and an increase in glare recovery time. No change was evident on near and far visual acuity, fundoscopic exam, visual field acuity and depth and color perception. However, a decrease in tear secretion and an increase in conjunctival injection was demonstrated.

Hepler and Frank (1971) reported an average of about 25% decrease in the intraocular pressure of most normal subjects after smoking marijuana. A preliminary trial in one patient with glaucoma demonstrated similar findings (Frank, 1971).

No objective impairment of improvement in visual acuity or brightness perception (Caldwell et al., 1970; Caldwell et al., 1969) nor effect on depth perception and duration of after image (Clark and Nakashima, 1968) was noted in other studies.

Neurological examinations have consistently revealed no major abnormalities during marijuana intoxication. (Mayor's Committee, 1944; Rodin and Domino, 1970; Rodin et al., 1970; Personal Communication, 1970). Subjects often report muscle weakness. Minimal decreased leg, hand and finger maximum muscle strength have been demonstrated objectively (Fere, 1901; Hollister et al., 1968; Mayor's Committee, 1944). However, electromyography was reported to be normal (Personal Communication, 1970).

A slightly increased briskness in the knee jerk has been detected (Domino, 1971; Rodin and Domino, 1970) while no change in threshold or elicitation of deep tendon reflexes is usually, reported (Hollister et al., 1968; Isbell et al., 1967).

Incoordination, fine tremor and ataxia are often experienced by the user (Ames, 1958; Beringer et al., 1932; Clark et al., 1970; Mayor's Committee, 1944). The presence of a fine tremor and decrements in hand steadiness and static body equilibrium have been demonstrated with refined measuring devices when they are not grossly observable (Manno et al., 1970; Mayor's Committee, 1944; Mendelson et al., 1972). Kiplinger et al. (1971) using sensitive apparatus demonstrated these fine hand tremors and changes in body equilibrium are also dose related.

Cranial nerve function and somatic sensation have not been significantly impaired or improved. Subjective reports of increased auditory sensitivity contributing to greater esthetic appreciation of music (Winick, 1960) have been generally unconfirmed in objective tests of auditory acuity and pitch, frequency or intensity or threshold discrimination (Aldrich, 1944; Caldwell et al., 1970; Caldwell et al., 1969; Clark and Nakashima 1968; Mayor's Committee, 1944; Meyers and Caldwell, 1969). Objective improvement in auditory acuity in several subjects was noted (Walton, 1938; Williams et al., 1946).

Similarly, improvement in visual acuity and discrimination and altered depth perception reported by users has been unconfirmed objectively (Caldwell et al., 1970; Caldwell et al., 1969; Clark and Nakashima, 1968; Mayor's Committee, 1944; Hollister and Gillespie, 1970; Jones and Stone, 1970; Frank et al., 1971).

A slight improvement in vibratory sensation (Rodin and Domino, 1970), no change in touch or two-point discrimination (Rodin and Domino, 1970; Williams et al., 1946) nor olfactory and gustatory senses (Williams et al., 1946) have been demonstrated. Decreased sensitivity to pain has been objectively demonstrated (Personal Communication, 1970) which corroborates its past therapeutic use as an analgesic.

One of the most frequently reported subjective effects of marihuana intoxication is a distortion of time sense (Tart, 1971). Actual elapsed time is overestimated or perceived as being longer than actual clock time. Thus, present events are perceived as prolonged when intoxicated and isolated from the past and future. They are in the "here-and-now" (Melges et al., 1971). Many have confirmed this experimentally (Ames, 1958; Clark et al., 1970; Mendelson et al., 1972; Dornbush and

Freeman, 1971; Hollister and Gillespie, 1970; Weil et al., 1968; Williams et al., 1946). The over-estimate is much greater during periods in which the subject is performing a task than for unfilled time, and the error is greater as the time period is longer (Clark et al., 1970).

Melges et al. (1971) have demonstrated that marihuana intoxication induces temporal distortions with a greater concentration on the present and a shortening of span of awareness into the past and future. They believe that under the drug's influence, as the subject becomes less able to integrate past, present and future, his awareness becomes more concentrated on present events. These present events are experienced as prolonged or timeless because they no longer appear to the intoxicated individual as transitions from the past to the future.

Melges and Bowlby (1969) have described habitual marihuana smokers who specifically use the drug to achieve the "here-and-now" orientation. These smokers claim this focus on the present permits them to be more open to immediate experience while being less troubled by past and future concerns. This focus may also explain the belief that perceptions during intoxications are both unexpected and never experienced previously.

The effect of intoxication on the resting electroencephalogram are still unclear but generally have been minimal, inconsistent and within normal limits. In early studies (Wikler and Lloyd, 1945; Williams et al., 1946) a decrease in alpha activity was noted. More recently (Ames, 1958) noted a delayed alpha increase with concomitant increases in beta and theta activity. Rodin and Domino (1971) reported a slight shift toward slower alpha frequencies.

Three other studies (Jones and Stone, 1970; Hollister et al., 1971; Rickles et al., 1970), failed to find consistent changes but noted increased alpha frequency, increased synchronization and occasional paroxysmal activity. These effects were ascribed to relaxation and drowsiness.

Two investigators (Chopra, 1935; Miras, 1969) reported decreased fast activity and other variable effects. Most recently, Volavka et al. (1971) and Fink et al. (1971), reported a significant rapid onset effect occurring during the five-minute smoking period and of short duration (less than 30 minutes) in continuously alert individuals. The principal changes detected by computer analysis were a dose related increase in percent alpha time and an associated reduction in theta and beta bands.

Roth et al. (1972), demonstrated that auditory evoked responses were decreased in amplitude by

marihuana and THC particularly during the first few minutes of stimulation. These results may indicate that the intoxicated individual may receive external auditory stimuli differently during the intoxication period.

The prominent and frequently reported sedative effects of marihuana and the dreamlike states occurring during intoxication directed several investigators to study the effects of marihuana on sleep. Fragmentary data from one sleep laboratory (Pivik et al., 1969) indicated decreased rapid-eye-movement (REM) sleep time. Another sleep lab (Rickles et al., 1970), in preliminary work demonstrated an increase in REM sleep time. Fink et al. (1971) noted that EEG defined sleep (stages one and two) were dose dependent but THC did not act like a classical sedative. The occurrence of EEG sleep was much more frequent in the placebo and low dose (10 mg THC) conditions than in the high dose condition (20 mg THC).

Mendelson et al. (1972) noticed an increased amount of total sleep as well as an increase in discrete episodes of sleep related to marihuana smoking. These findings correlate well with questionnaire data (Tart, 1970) indicating that at moderate doses, users found it easier to induce sleep and that sleep was considered to be more refreshing, while at higher doses both aspects were impaired.

In summary, marihuana containing Δ -9-THC is a pharmacologically active drug with minimal acute physiological effects at the low to moderate doses used by man.

Based on its few consistently observed physiological effects, marihuana is a rather unexciting compound of negligible acute physiological toxicity at the usual doses consumed by man. The subjective state characteristically described by the intoxicated user is far more interesting to both the user and the scientist than the objective one observed by the investigator.

EFFECTS ON MENTATION AND PSYCHOMOTOR PERFORMANCE

Characteristically, intoxication with psychoactive materials effect psychomotor and mental functions. It is apparent from the subjective assessments of users and a wide range of experimental studies that marihuana is no exception (Clark and Nakashima, 1968; Clark et al., 1970; Dornbush and Freedman, 1971; Hollister and Gillespie, 1970; Manno et al., 1970; Mayor's Committee, 1944; McGlothlin et al., 1971; Melges et al., 1970; Meyer et al., 1971; Weil and Zinberg, 1969; Weil et al., 1968; Volavka et al., 1971; Galanter et al.,

1972; Kiplinger et al., 1971; Mendelson et al., 1972; Dornbush et al., 1971).

Psychomotor tasks which have been tested include tapping speed, handwriting and free-hand writing and free handdrawing, simple and complex reaction time, pursuit rotor and tracking tasks and continuous performance tests. Cognitive tasks frequently tested are simple arithmetic problems, serial addition or subtraction, fine judgment tasks, digit-symbol substitution test, digit-code memory, reading comprehension, speech or verbal out-put, forward and backward digit spans, goal directed complex serial subtractions and additions to reach a set end sum, and short-term or immediate memory functions.

In general, Kiplinger et al. (1971) have clearly demonstrated that the degree of impairment is dose related and varies in degree during the period of intoxication exerting its maximal effect at the peak intoxication.

Naive subjects commonly demonstrate greater decrement in performance than experienced users but report less subjective effect (Weil et al., 1968). Experienced users appear to better compensate to the effect of the drug especially for ordinary performance at lower doses (Clark and Nakashima, 1968; Clark et al., 1970; Crancer et al., 1969; Jones and Stone, 1970; Meyer et al., 1971; Weil and Zinberg, 1969; Jones, 1971; Mendelson et al., 1972). Performance of simple or familiar tasks (i.e. simple reaction time) during intoxication is minimally effected. However, on unfamiliar or complex tasks (i.e., complex reaction time), performance decrements occur (Weil and Zinberg, 1969; Dornbush et al., 1971; Moskowitz et al., 1970).

Performance decrements are further enhanced when verbal tasks are performed during delayed auditory feedback (Kiplinger et al., 1971). Also marked individual differences in performance are noted between similar subjects. (Clark and Nakashima, 1968; Clark et al., 1970; Manno et al., 1970; Kiplinger et al., 1971). A cyclical waxing and waning of the intensity of the intoxication and concomitant performance occurs periodically (Clark et al., 1970; Melges et al., 1970).

Finally, when subjects concentrate on the task being performed at "normal social high," objective evidence of intoxication is not apparent and the individual may perform better than when drug free (Rodin and Domino, 1970; Mendelson et al., 1972).

Obviously, these observations raise practical doubts regarding the intoxicated individuals' ability to function at jobs requiring memory, concentration, and organization of thinking.

THE INTOXICATED MENTAL STATE

Several investigators have suggested that short-term memory is the mental function most significantly affected by marihuana and contributes to the subtle alterations of mental functioning noted. Generally an impairment of recent or short term memory is demonstrated (Abel, 1970, 1971; Dornbush et al., 1971; Melges, 1970-71; Tinklenberg, 1970; Clark et al., 1970; Weil et al., 1968). Thus, mental tasks requiring immediate information acquisition (Abel, 1971) and/or retrieval (Weil et al., 1968) are effected.

Abel (1971) recently showed that marihuana blocks the acquisition process involved in the storage of new information but did not interfere with the retrieval of already stored information. Decrements are produced in decisions requiring recent memory or sustained alertness (Clark et al., 1970); conversation (Weil et al., 1968); calculations, or reading which requires retention, coordinating and indexing sequential information termed temporal disintegration (Melges et al., 1970, 1971).

Melges et al. (1970, 1971) theorizes that episodic impairment of immediate memory produces voids which are filled with perceptions and thoughts extraneous to the organized mental processes. He suggests that this leads to temporal disintegration producing a fragmented and disorganized temporal experience in which past and future time frames are blurred and the present is experienced as prolonged or boundless. Thus, depersonalization occurs as the individual experiences himself temporally in a strange and unreal manner during marihuana intoxication.

UNPLEASANT REACTIONS: "TOO STONED" AND "NOVICE-ANXIETY"

These substantial cognitive and psychomotor effects are probably responsible for many of the acute adverse reactions to marihuana. One of the most common is the heavy, drugged feeling where the individual feels mentally and physically sluggish so that every motion and thought seems to require extreme effort (Smith and Mehl, 1970). This probably reflects impaired cognitive function and psychomotor retardation from getting "too stoned." This most frequently occurs after oral ingestion of a large dose of drugs or in inexperienced smokers who have not learned to self-titrate their dose to achieve the desired high.

In these instances, depression, anxiety, fatigue, short-term memory loss, dizziness, nausea, incoordination, palpitations are experienced as generalized discomfort and ill-being.

"Novice anxiety reactions" or panic reactions account for a majority of acute toxic reactions to

marihuana (Baker and Lucas, 1969; Baker-Bates, 1935; Gaskill, 1945; Grossman, 1969; Persyko, 1970; Bialos, 1970; Sonnenreich and Goes, 1962; Sigg, 1963; Dally, 1967; Hamaker, 1891; Marten, 1969; Smith and Mehl, 1970; Walton, 1938).

When dosage, set and setting are optimal the distortion of self (depersonalization) and temporal disintegration (timelessness of the present moment) common to marihuana intoxication is recognized by the individual as time-limited and drug-induced. It is usually experienced as pleasurable. But, if dose, set and setting are not optimal the experience may cause the intoxicated individual to fear that loss of his identity and self-control may not end or that he is dying or losing his mind. Acute anxiety or panic results (Melges et al., 1970).

Non-drug factors of set and setting play a most important role in these reactions. Of course, the great variability of individuals makes the effect of marihuana on any specific individual rather unpredictable.

The large majority of these anxiety reactions occur in novices who have intense underlying anxiety surrounding marihuana use such as fears of arrest, of disruption of family and occupational relations and of possible physical and mental dangers. Also, individuals with relatively rigid personality structures, whose values are more in line with those of the "straight" society and have little desire for new and different experiences, appear to experience these anxiety reactions much more frequently than those individuals who are members of the "counterculture" (Smith and Mehl, 1970).

In addition, simple episodes of neurotic depression may be observed in these same types of individuals during periods of unusual psychological stress (Weil, 1970). Both of these types of reactions are transient and abate as the drug effects wear off over a few hours. Treatment should consist of gentle but authoritative reassurance that nothing is seriously wrong and that the drug effects will wear off and the individual will feel "normal" again (Smith and Mehl, 1970; Weil, 1970).

ACUTE PSYCHOSES

Rare cases of full-blown acute psychotic episodes precipitated by marihuana use are reported in individuals with histories of mental disorder, with marginal psychological adjustments or with poorly developed personality structures and ego defenses (Talbot, 1968; Heiman, 1968; Kaplan, 1971; Perna, 1969; Keeler, 1968; Defer and Diehl, 1968; Wurmser et al., 1969; Allentuck and Bowman, 1942; Bromberg, 1939; Bromberg, 1934;

Curtis and Wolfe, 1939; Hughes et al., 1970; Isbell et al., 1967; Keup, 1970; Keeler, 1967; Talbott and Teague, 1969; Mayor's Committee, 1944).

Marihuana intoxication may hinder the ability of these individuals to maintain structural defenses to existing stresses, or, alternatively produce a keener awareness of personality problems or existing stresses (Smith, 1968). Psychotherapy and antipsychotic medications are useful in controlling and preventing this reaction (Weil, 1970).

Exceptionally rare reports from North America of non-specific toxic psychosis or acute brain syndrome have occurred after extremely high drug dose consumption, although such reports are more common in the eastern countries. These conditions are self-limited and clear spontaneously as the drug effect abates (Weil et al., 1968; Bartolucci et al., 1969; Ames, 1958; Isbell et al., 1967; Mayor's Committee, 1944; Williams et al., 1946).

Finally, marihuana intoxication may trigger delayed anxiety reactions or psychotic episodes in a small percentage of persons who have prior experience with hallucinogenic drugs (Ungerleider et al., 1968; Ungerleider, 1969; Weil et al., 1968; Favazza and Domino, 1969).

In summary, the acute psychomotor-cognitive effects of marihuana intoxication are interesting academically to gain understanding of normal and abnormal mental function. Also, for practically determining the danger-risk factor for the individual including determination of his functional level personally, vocationally and socially in this society. The effect on personal-social-vocational function is highly individualized and difficult to predict at present.

Although reports of anxiety attacks and psychotic episodes are more frequent as marihuana use spreads, they are still exceedingly rare and their incidence appears to be decreasing as use becomes more acceptable to more diverse populations. For example, during the nine-year period of 1961 to 1969, out of 701,057 admissions to Los Angeles County Hospital, located in a city with very high marihuana use, only three patients required hospitalization for psychic sequelae of marihuana smoking (Lundberg, et al., 1971).

In contrast, many cases are being seen in Vietnam soldiers where a extremely potent material is available and daily stresses are high, but these probably represent only a small fraction of marihuana users (Talbott and Teague, 1969; Talbott, 1968; Heiman, 1968).

During the academic year 1968 and 1969, eight students were seen in the mental hygiene division of a private Eastern University student population (8,500) with acute anxiety reactions (Bialos,

1970). The frequency of marihuana-associated acute adverse anxiety reactions requiring attention at Boston University Student Health Service (student population 20,000) is between five and seven yearly (Pillard, 1970).

In a recent survey of newly admitted patients to a large mental hospital, marihuana was the direct cause of the hospitalization in only 0.9 per thousand admissions (Keup, 1970).

PERSISTENT EFFECTS AFTER ACUTE DOSE

Investigators have not noted persistent effects after smoking marihuana for periods of more than three to five hours (Fink et al., 1971; Weil et al., 1968; Pillard, 1970).

Users report only minimal hangover effects (Mayor's Committee, 1944; Haines and Green, 1970; McGlothlin et al., 1971) after very heavy use. Feelings of lassitude and heaviness of the head, lethargy, irritability, headaches and loss of concentration are reported especially when associated with lack of sleep (Chopra and Chopra, 1939; Indian Hemp, 1893). This may be related to preliminary data (Rickles et al., 1970) suggesting a subtle increase in REM sleep time primarily seen in the last one-third of the night in individuals who smoked one to two cigarettes per day usually at night for at least a year.

EFFECTS OF MARIHUANA USE ON CONCOMITANT BEHAVIOR

Mendelson et al. (1972), under contract to the Commission, analyzed, the effects on behavior of acute marihuana intoxication on an extensive variety of assessments including a simple operant task, mood states, individual and group observations before, during and after smoking and clinical psychological evaluations.

Sleep-inducing properties were confirmed. Increased amounts of total sleep were observed in both number and length of shorter and longer blocks of consecutive hours of sleep related to marihuana smoking.

Examination of mood assessments prior, during and after marihuana smoking indicates that the acute effects were a reduction of negative moods (anxiety, hostility, and guilt-shame) and an increase in the positive moods (carefreeness and friendliness). Examinations of the mood prior to smoking revealed that the subjects tended to smoke marihuana when they reported generally positive moods. The effect of the drug was to increase this positive mood. One paradoxical finding was that the subjects also reported feeling more depressed after smoking.

Acute effects of marihuana on cognitive and motor functions were studied with a battery of tests sensitive to brain function (Halstead Category Test, Tactile Performance Test, Seashore Rhythm Test, Finger Tapping Test, Trail Making Test and the Weschler Adult Intelligence Scale). No alterations in performance as a result of acute intake of marihuana were noted in any of these.

The acute effect of marihuana smoking on social behavior was investigated by observing the individual and his interaction in small groups. The data indicated very strongly that marihuana smoking, in addition to being a subjective drug experience, is also a social activity around which verbal interaction and other types of social behavior are centered.

Although marihuana smoking tended to be a group activity, subjects did not always engage in verbal communication while smoking. Subjects often were observed withdrawing from the social interaction and then participating in some type of noncommunicative passive activity, such as watching television, listening to music, reading or staring at objects or people. This decrement in total interaction appeared to be a drug effect.

Heavy marihuana users tended to be more withdrawn than the intermittent users, often listening to the stereo and focusing on the personal effects of the drug. The intermittent users tended to watch television which provided group entertainment, thus enhancing the social effects of the drug.

Verbal interaction in formal task-oriented discussion groups diminished when several group members were simultaneously intoxicated. However, groups engaged in problem-solving tasks performed more efficiently because less suggestions and discussion ensued before proposing a workable solution. The groups tended to become more convivial and less task-oriented although none failed to arrive at the goal. Marihuana did not appear to increase hostility during these sessions and furthermore tended to change the nature of hostile communication from direct criticism to indirect sarcasm.

Assessment of risk-taking behavior revealed that under the influence of marihuana, users tend to become more conservative in the decision making.

In summary, it appears that marihuana does exert subtle effects on measurable components of social behavior and interaction.

Effects of Short-Term or Subacute Use

ANIMAL STUDIES (PRECLINICAL)

Studies have only begun in this area in the last 10 years. Subacute toxicity studies in rats involv-

ing 30 daily intraperitoneal injections of up to 30 mg/kg THC were recently reported by Phillips et al. (1971). No fatalities were observed. Total body and organ weight gains were significantly retarded over the period. However, no significant differences in organ histology were detected although in a few animals there were suggestions of change in liver and testicular cells. An interesting phenomena also observed was a suggestion of increased sensitivity to effects of Δ^9 THC occurring after two weeks of daily treatment.

Thompson et al. (1971) under contract to NIMH studied the toxicity in rats treated daily for seven, 28, 91 and then 119 days with oral Δ^9 THC, Δ^8 THC and crude marihuana extract at doses from 50 to 500 mg/kg. The findings were generally similar for all three preparations although Δ^9 effect was greater than Δ^8 THC which in turn was greater than CME.

A bimodal pattern of behavioral toxicity was exhibited by the cannabinoids for all time periods of dosing ranging from five to 119 days. Initially, a dose-related generalized central nervous system depression was noted. This was characterized by huddled posture, inactivity, drowsiness, slow movements, unkempt appearance, loss of appetite, widistance, constipation, weight loss, depressed respiration and heart rate and fall in body temperature. Tolerance gradually developed to the initial depressant effects starting after two to five doses and continued at different rates for different parameters.

Concomitant to the development of tolerance, rats exhibited progressively more hyperactivity, manifesting increased exploratory behavior, grooming and motor activity. The daily duration of the altered behavior progressively shortened. Tolerance to the hyperactivity was not seen in the rats. Later, in the experimental period, the rats became hyper-irritable and exhibited fighting behavior, especially at lower doses. Additionally, tremors and later chronic convulsions occurred in significant numbers of rats.

The onset and frequency of chronic convulsions were dose-related and the severity increased as the duration of dosage was extended. Cumulative toxicity, as evidenced by increased mortality, was observed in the rats but most deaths and maximal toxicity (central depression) occurred 36 to 72 hours following first treatment. Drug dose-related histopathological changes in all treated rats (in addition to decreased body and organ weight gains) were hypocellularity of the spleen and bone marrow, vacuolization of the adrenal gland and degeneration of the testes (seminiferous tubules) or ovarian stroma. Extended doses from five to

119 days were not significantly more toxic except to the adrenals. No evidence of abstinence syndromes were noted upon abrupt cessation of these doses.

Similar behavioral and clinical findings were observed in monkeys given 50–500 mg oral Δ^9 THC, Δ^8 THC and equivalent CME for up to 91 days. Cumulative toxicity was less severe and all monkeys survived the initial moderately severe central nervous system depression. Tolerance to the depression occurred and the monkeys returned to their undrugged behavior. Mild hyperactivity was noted only in several of the median dosed animals.

Three of 28 monkeys studied became moribund on days 10, 14 and 16 respectively. These were sacrificed and the only histopathology seen was severe hemorrhagic and probably drug-related enterocolitis. The bone marrow and kidney changes seen probably were due to severe electrolyte imbalance resulting from the intestinal lesion. The thymus lesion is consistent with stress due to this electrolyte imbalance. Pancreatic atrophy was due to weight changes. Eight additional monkeys were sacrificed at 28 days in fair-to-good condition and no histopathology was demonstrable. Several other monkeys had bloody diarrhea but recovered spontaneously without demonstrable histopathology.

The remaining 17 monkeys were all in fair-to-good condition at 28 days and hyperactivity was no longer observed. They were treated at the same dose for an additional 63 days. Tolerance to the central depression continued to develop so that the effects lasted only one to two hours at 91 days. No additional monkey fatalities were recorded and the remaining 17 monkeys were normal histopathological at autopsy. Urine and ophthalmological examinations were all within normal limits. Hematological and blood chemical changes after 28 and 91 days were minor and little affected in the surviving monkeys.

Thus, a minimal toxicity in monkeys, either physical or behavioral, is evident after 91 daily doses orally of enormous amounts of Δ^9 THC. However, significant cumulative toxicity, primarily a generalized central nervous system depression, is evident in the first few days but tolerance rapidly develops to these effects. A dose-related hemorrhagic enterocolitis occurred which may lead to electrolyte imbalance and death in a few monkeys. This probably is a direct irritative phenomena.

Again, the enormous daily doses of THC that were administered to these animals cannot be compared to the daily doses used in man even by the heaviest users.

The effects were observed of 28 daily administrations to monkeys of intravenous Δ^9 THC in sesame oil—Tween 80—saline vehicle at doses of 5, 15 and 45 mg/kg. Behavioral, clinical, hematological and hemochemical changes were similar for monkeys given single or repeated injections. However, the duration was extended in the 28-day groups and tolerance gradually developed. Delayed death indicative of cumulative toxicity occurred on days eight and 19 in two of four animals given the largest dose.

Histopathological changes, noted in the two animals which succumbed and in one of the high-dose monkeys, were acute hemorrhagic pneumonia resembling the finding in the single-intravenous studies at doses of 128 mg/kg or greater. Additionally in the repeated dose study, edema, ulceration and fibrosis at the injection sites probably contributed to minor hematological and hemochemical alterations.

In summary, the 1972 *Marihuana and Health Report* to the Congress from the Secretary of HEW noted that these doses were employed in rodents and mammals to test the limits of toxicity. The doses are much higher than those used by man and the routes of administration substantially different. These studies have shown that the margin of safety between the lethal dose and the pharmacologically active doses of Δ^8 and Δ^9 THC and crude marihuana extract is large. Consequently, it has been determined that these compounds could be safely administered to man for Phase I and early Phase II clinical studies (Secretary of HEW, Feb. 11, 1972, p. 158–160).

HUMAN EXPERIMENTS (CLINICAL)

Only a few investigators have studied the sub-acute administration of marihuana to man. Marihuana cigarettes of unknown potency were made available to 34 military prisoners in Panama by Siler et al. (1933). The mean daily consumption was five cigarettes (range one to 20). The usual behavior effects associated with marihuana use were noted. No ill effects were observed nor abstinence syndrome seen.

Williams et al. (1946) made available marihuana cigarettes of unknown potency to six prisoner addicts who were experienced marihuana users in the Public Health Service Lexington Hospital. The subjects were permitted to freely consume the drug in any quantity desired. The number of cigarettes consumed increased only slightly over a 39-day period. The daily range was from nine to 26 per day with a mean of 17. Only minimal evidence of tolerance was seen. There was no evidence of physical dependence; that is, no observable ab-

stinence syndrome was observed after abrupt termination of the drug.

In general, the following observations were made on these subjects: daily rectal temperature increased slightly; pulse rate increased for three weeks, then returned to normal; no change was noted in respiratory rate, coordination, or rote memory; increase was noted in sleep and body weight while caloric intake initially increased then progressively decreased; mild confusion was observed; general intelligence tests were slightly impaired while psychomotor tests were performed faster but less accurately; EEG showed inconsistent changes but returned to normal five days after cessation; and mood was euphoric for several days followed by general lassitude and indifference.

In a recent uncontrolled preliminary study (Personal Communication, 1970), marihuana extract was administered daily to eight terminal cancer patients from four to 13 days (mean 8.5 days). Daily doses were purposefully raised by the investigator from 7.5 mg (mean daily dose 19.8 mg THC). The total dose per individual patient averaged 168 mg with a range from 75–210 mgs.

Euphoria was experienced by all eight subjects and one had a transient acute anxiety episode at a high dose. Three subjects demonstrated decreased opiate analgesic needs indicating an analgesic effect of the drug. Five subjects reported improved appetite and five, of six tested, demonstrated objective improvement in depression on Back scale. No new changes were seen in physiological parameters, neurological status, blood cell and chemistry values or urine examination. During the period of drug effect, drowsiness was common but not lethargy, lassitude or indifference. In fact, all became more active on the ward. No evidence of abstinence symptoms were seen after abrupt discontinuation of the drug.

Volavka et al. (1971) in preliminary experiments administered two marihuana cigarettes daily (13 mg Δ^9 THC) to four detoxified heroin addicts. Pleasant effects peaked during the second week and then leveled off. Prominent dysphoric effects and depressive reactions with paranoid thoughts appeared during the third to sixth days and persisted causing cessation of the study by one subject after 10 days and after 17 days by another. The other two subjects completed the entire planned 22 days.

Again no abstinence syndrome was seen and the dysphoric symptoms disappeared within five days after the last dose. Consistent electroencephalogram changes developed in three of four subjects indicating increased synchronization. Their EEG changes first appeared immediately after smoking.

In two of the four subjects they were detectable in the presmoking records after days 12 and eight, and did not begin to subside until 48 hours after the last dose in two subjects and persisted for the entire 72 hours follow-up in a third subject.

Fink et al. (1971) subsequently studied five medical and graduate students who had been almost daily marihuana smokers in college and were currently weekend smokers. Each subject smoked under laboratory conditions one marihuana cigarette containing 14 mg of THC each morning daily for 21 days.

No subject reported any adverse effects from smoking. The subjects were generally able to conduct their usual daily activities including jobs. However, they reported they did not function completely up to par during the several hour duration of the acute drug effect. There were no effects which persisted for more than three to five hours and cumulative effects were not noted day to day. No persistent decrements were seen in behavior, mental status, EEG, heart rate, short-term memory, or psychomotor function tests. In sum, daily marihuana smoking for 21 days was well tolerated by well-adjusted graduate students.

Mendelson et al. (1972) performed a Commission-sponsored study of the biological and behavioral concomitants of 21 days repeated doses of marihuana. Subjects were individuals whose life style, activities, values and attributes were more characteristic of the unconventional youthful subculture than most of their peers in the general population. Their mean age was 23. Based on I.Q. testing they were superior intellectually although they had completed, on the average, two-and-a-half years of college. Their job histories were rather erratic and characteristic of a pattern of itinerant living. Their family background was a middle or lower-middle socioeconomic status. In addition alcohol use was infrequent while use of drugs, especially hallucinogens and amphetamines, was significant.

Two groups of 10 subjects each were investigated over separate 31-day periods of confinement on a comfortably furnished research ward equipped with an array of recreational materials. A large open yard was available for outdoor recreational activities. The research period was divided into three periods: a pre-drug period of five days during which the subjects were drug free; a subsequent 21-day period when marihuana could be earned by performing a work-contingent operant task, then purchased and smoked on a free-choice basis; and a five-day post-drug period without access to marihuana.

All attempts were made to not interfere in any way with performance of the operant task or free-choice marihuana smoking although the subjects were under constant observation. A vast array of behavioral and biological assessments were made during the experimental period to determine any effect of repeat doses of marihuana over this time.

Two groups of subjects, studied separately, differed primarily in the frequency of marihuana smoking over the past year. Both groups had averaged about five years of marihuana use (range two to 17 years). The first group studied, referred to as the "casual" users by the authors, reported an average frequency of marihuana use of 7.7 occasions per month (range three to 15 occasions). The second group studied, referred to as the "heavy" users by the authors, reported almost daily use of marihuana (average 33 sessions per month; range 20+ to 75, including one substitute subject to fill the group who only smoked about 10 times a month).

During the first 20 days of the smoking period, the casual group's consumption averaged three cigarettes daily (individual average was one-half to six) while that of the heavy users averaged six-and-a-half cigarettes daily (individual average three to eight-and-a-half). Both groups demonstrated a progressive trend toward increased daily consumption during the experiment. Close examination of the consumption patterns for individual subjects showed that the trend toward increased use occurred in the subjects who were initially the heaviest users. Several subjects who were initially the least frequent users did not increase their use of marihuana over the course of the study.

Subjects in both groups tended to smoke practically all of each cigarette including the butt. Each cigarette contained about 20 mg Δ^9 THC. Therefore the heavy users average daily intake was 130 mg of THC or a total of almost four grams of THC over the 21-day period. The casual users average intake was slightly less than half this amount.

No abstinence syndrome or physical dependence was observed after abrupt termination of smoking. Signs of mild to moderate psychological dependence were possibly seen in the heavy group but no evidence of psychological dependence was seen in the casual users.

No consistent clinically significant physiological or biochemical changes were demonstrated during or after the period of repeated use of marihuana.

Urinalysis, complete blood counts, cell morphologies and differentials, and blood chemistry determinations (calcium, phosphorous, glucose, blood urea nitrogen, uric acid, cholesterol, total protein,

albumen, total bilirubin, alkaline phosphatase, lactic dehydrogenase, and serum glutamic oxalacetic transaminase) were unaffected.

Weight gain occurred in all but one subject. Maximal gain was seen during the marihuana smoking period. The subjects were not judged to be clinically malnourished prior to the experiment.

Normal body temperature was not altered. No significant change in pulmonary function (decreased vital capacity or acute broncho spasm) was observed during the marihuana smoking period.

Variable inconsistent changes in upright blood pressure were noted. Effects on pulse rate were related only to acute drug administration and were more pronounced during the initial smoking phases. This suggests that tolerance developed to drug-induced tachycardia. No significant electrocardiographic changes were observed. Marihuana smoking had no apparent effect on exercise related cardiac vascular function.

Physical examinations revealed only the development of persistent conjunctival injection, lateral gaze nystagmus and fine finger tremors. These findings were believed to be acute drug effects and of no clinical significance. No signs of neurological abnormality were observed. No cumulative effect of marihuana to cause impairment of cognitive function was noted on a battery of tests sensitive to organic brain function.

An increased amount of sleep in both shorter and longer blocks of consecutive hours was observed. Also an increase in the number of discrete episodes of sleep, especially one to three hour episodes also occurred during the marihuana use period. Reappearance of pre-drug pattern was seen during the post-drug period. This reversion appeared to begin toward the end of the drug period which may be indicative of tolerance to the acute depressant-like effects of marihuana.

Generally, performances on short-term memory, psychomotor skills and time estimation suggests that repeated marihuana smoking had no discernible effect on the ability to improve performance with practice on these measures. Tolerance appeared to develop to the acute decrement in performance on these measures. On the time estimation task, a tendency appeared for the subjects to increasingly over-compensate for the acute drug effect with repeated testing in the non-intoxicated state.

Both casual and heavy users had a marked decrement in total social interaction during the first portion of the marihuana smoking period. Total interaction of the casual subjects continued to diminish subsequently. Heavy users subsequently tended to exceed presmoking levels of interaction

indicating they accommodated to the depressant effects of repeat doses of marihuana.

Both groups became progressively more convivial and less task-oriented in group discussions. They offered less suggestions in problem-solving tasks but continued to efficiently solve the problem.

Casual users reported general relative increases in negative daily moods and decreases in positive daily moods during the course of the study. The trend began with the onset of smoking and persisted through the post-smoking period. This trend could be a sequelae of repeated marihuana use or related to non-drug variables (set and setting).

The heavy users did not evidence this trend toward relative increases in dysphoric mood until the post-smoking period. Again this may be related to repeated marihuana use, reflect psychological dependence or be related to set and setting variables, such as boredom and tension associated with the prolonged study period.

Finally, repeated use of marihuana over the 21-day period did not decrease motivation to engage in a variety of social and goal-directed behaviors. Almost without exception, every subject earned the maximum number of points every day throughout all non-drug and drug periods. No consistent alteration in pattern of work could be related to repeated marihuana use. Subjects often performed very high work output while they were smoking marihuana and experiencing the maximum drug effects.

Repeated marihuana use did not decrease subject's motivation to complete the study. Nor was any noticeable effect observed on interest and participation in a variety of personal activities, such as, writing, reading literature, keeping up with current national and world events, and participation in both athletic and esthetic endeavors.

Effects of Long-Term Cannabis Use

Patterns of marihuana use in Western countries, particularly the United States are primarily long term (two to 10 years). Additionally, Western investigators have been able to observe those who use marihuana at most, daily and more often, moderately or intermittently. Consequently, observed effects are rare. Knowledge is incomplete but certain trends appear to be emerging in regard to American usage patterns.

The relevance of Eastern reports of heavy hashish use is uncertain. Nutrition, disease prevalence and quality of medical care impose limits on transferring Eastern observations to Western conditions of use.

DEPENDENCE AND TOLERANCE

Neither severe physical dependence, nor prominent withdrawal symptoms after abrupt termination of very heavy usage is suggested by some overseas experience (Charen and Perelman, 1946; Fraser, 1949; Ludlow, 1857; Marcovitz and Myers, 1944; Siler et al., 1933; Walton, 1938). Other studies, however, suggest marked psychological dependence from heavy use producing compulsive drug taking in very heavy users (Indian Hemp, 1893; Chopra and Chopra, 1957; Bouquet, 1944; Lambo, 1965).

Psychosomatic abstinence syndromes often reported were physical weakness, intellectual apathy, loss of appetite, flatulence, constipation, insomnia, fatigue, abdominal cramps and nervousness, restlessness, and headache. For most heavy users the syndrome of anxiety and restlessness seem to be comparable to that observed when a heavy tobacco smoking American attempts to quit smoking.

However, the psychological dependence appears to be severe as evidenced by the fact that one group of subjects were unable to cease their habitual use although the frequency of use was only eight to 12 times per month (Soueif, 1967). This psychological dependence may have made some users claim physical dependence so that the government did not terminate dispensing them their drug. Studies in the United States using much lower doses for shorter periods of time have revealed little if any evidence of psychological dependence (Bromberg, 1934; Mayor's Committee, 1944; Williams et al., 1946).

Tolerance to the subjective and depressant effects of the drug (discussed in an earlier section) does probably occur in man, with heavy use. Thus, increasingly larger and more frequent doses become necessary to experience the desired effects.

Several investigators have recently studied the question of physiological and psychological dependence to Δ^9 THC in monkeys using intravenous self-injection techniques.

Deneau and Kaymakalan (1971) demonstrated that no monkey initiated self-administration over a three-week period when given the opportunity to self-inject a behaviorally effective dose of 100 micrograms per kilogram of Δ^9 THC in a Tween solution. The researchers subsequently administered to these monkeys this dose every six hours. Tolerance developed to the behavioral effects within a few days. Dose administered was progressively increased up to 400 micrograms per kilogram over the course of a month. When the injections were abruptly discontinued, all six monkeys showed after twelve hours, behavioral and physiological changes described by the researchers

as mild abstinence signs. Two of the six monkeys then initiated and maintained for several weeks the self-administration of THC.

The investigators believe these findings are evidence for mild psychological and physiological dependence on THC. However, vehicle controls were not included in the research design. Thus, the abstinence signs and subsequent behavior may possibly be accounted for by the biological effects of the Tween vehicle.

Harris et al. (1972) utilized several procedures to maximize the possible conditions necessary for developing self-injection in monkeys. These procedures included: spontaneous Δ^9 THC self-administration with no previous training to the technique; self-administration of Δ^9 THC after training with cocaine alone and a mixture of cocaine and Δ^9 THC. Doses utilized ranged from 20 to 500 micrograms per kilogram suspended in polyvinylpyrrolidone. In all cases, monkeys failed to self-administer Δ^9 THC.

The researchers conclude that Δ^9 THC lacks the reinforcing effects of psychomotor stimulants and depressants which monkeys readily self-infuse with no auxiliary incentives. Also Δ^9 THC lacks a reinforcing function even for monkeys that are well-trained with cocaine and have experienced several days of rather large quantities of Δ^9 THC during the early phases of extinction of the cocaine reinforced response.

Finally, the results demonstrate that a two-week period of exposure to Δ^9 THC (in a mixed solution with cocaine) does not result in the degree of homeostatic imbalance which occurs with morphine, ethanol, barbiturates and sometimes the amphetamines which accounts for the continued self-administration of these drugs.

PHYSIOLOGICAL EFFECTS

Permanent congestion of the transverse ciliary vessels of the eye and accompanying yellow discoloration is the only physical effect firmly linked to long-term marihuana use (Ames, 1958; Chopra and Chopra, 1957; Dhunjibhoy, 1928). Although there are several suspected or reported effects, none has been conclusively demonstrated in a valid study. Some (Chopra and Chopra, 1939; Indian Hemp, 1893) claim that bronchitis, asthma and other respiratory problems may be produced by chronic and excessive use of potent compounds in India. Eastern smoking preparations are often a mixture of tobacco and hashish.

Indian users reportedly exhibit digestive tract abnormalities, weight loss and disturbed sleep (Chopra and Chopra, 1939; Soueif, 1967). However, the contributing factors of poor living con-

ditions, malnutrition and prevalence of communicable disease could not easily be separated.

A high percentage of heavy Moroccan users have developed obliterative arteritis of the lower extremities (Sterne, 1960) possibly related to the occurrence of tropic foot ulcers (Ganja foot) (Miras, 1965). The progression of this abnormality is claimed to parallel prolonged use of the drugs.

Mendelson et al. (1972) were unable to demonstrate clinically significant abnormalities in the extensive battery of tests performed which could be attributed purely to the subjects long-term use of marihuana. No histories were obtained of neurological, hepatic, renal, pulmonary, cardiac, gastrointestinal, genitourinary, or nutritional disorders. No history of psychotic illness was given.

All subjects were judged to be in normal mental health by psychiatric interview and psychological tests (MMPI and Edwards Personality Preference Inventory). Three subjects were felt to be neurotic.

Pre-drug complete physical exams, chest X-ray, electrocardiogram, urinalysis, complete blood count and blood chemistry profile did not demonstrate any clinically significant abnormalities. No subject showed evidence of poor nutrition.

Pulmonary vital capacity and one second forced expiratory volume were reduced in 12 of the 20 subjects initially. These changes were not correlated with either current cigarette smoking or frequency or duration of marihuana smoking. Histories of past cigarette use, past patterns of marihuana use and past or present contact with environmental air pollutants were inadequate to attempt to account for these pulmonary findings.

Many of the subjects were in fair to poor physical condition as judged by a cardiac exercise tolerance test.

Four of the 20 subjects' initial performance on a battery of cognitive functions tests was poorer than would have been predicted by high average to superior I.Q. scores and educational backgrounds. One of the casual subjects demonstrated improvement with retesting consistent with good brain function. Thus, behavioral impairment was present in three subjects.

Whether the impairment is related to prior drug histories, particularly the excessive use of LSD by the two heavy users, cannot be ascertained. For the casual users, nothing in the case histories possibly elucidated the reason for relatively poor performance based on the exceptionally high I.Q., 139 and 128.

Many Western investigators have suggested that smoking hashish or marihuana may possibly cause bronchitis, asthma or rhinopharyngitis (Bloom-

quist, 1967; Waldman, 1970; Tylden and Wild, 1967; Schwartz, 1969).

Tenant et al. (1971) described bronchitis, sinusitis, asthma and rhinopharyngitis in 22 American soldiers in Germany who smoked daily enormous quantities (100 grams or more) of hashish for six to 15 months. These conditions, believed to be caused by irritation of the respiratory tract by hashish smoke, seemed to improve with diminished hashish use.

Twenty-one of the subjects were tobacco cigarette smokers and occasionally smoked hashish rolled in a tobacco cigarette. Nine patients had symptomatic bronchitis. Five of these subjects underwent pulmonary function tests while consuming their usual daily amount of hashish and again three days after discontinuing use. A mild obstructive pulmonary deficit was demonstrated which was at least partially corrected with diminished hashish intake. Hashish contributed to rhinopharyngitis in 12 of the patients and this effect was not allergic in origin. Urticaria, acne, diarrhea and gastrointestinal cramps were less frequent complaints. Extensive hematological and hemochemical studies including liver function tests were performed and were within normal limits.

Mann et al. (1970, 1971) and Finley (1971) studied the effect of marihuana smoking on the pulmonary function of eight non-cigarette smoking marihuana smokers (20-27 years old). Marihuana smoking history was defined in marihuana cigarette-years, that is, one marihuana cigarette daily for one year or the equivalent over a longer or shorter period. The mean marihuana cigarette years for the group was 11 and the range from 2.5 to 26. Three of the marihuana users also used hashish. Chest X-ray, comprehensive spirometry determinations, lung volumes and carbon monoxide diffusion studies were observed and retested with prednisone. Pulmonary functions were essentially normal for all of the non-cigarette smoking marihuana smokers and non-smoking controls.

These investigators were able to distinguish differences in quantity and structure and function in pulmonary macrophages and lining material between marihuana smokers and non-smokers. In tobacco smokers more marked changes were noted. These changes do not indicate a diminution in defensive capacity of these cells.

Kew et al. (1969) has suggested a possible hepatotoxic effect of marihuana. Eight persons who smoked marihuana for two to eight years, at least six times a week, evidenced mild liver dysfunction by liver function tests and liver biopsy. Several of the patients admitted to the use of alcohol and oral amphetamines but denied use of

intravenous drugs. The authors concluded that the findings were not unequivocally due to marihuana.

Hochman and Brill (1971) noted abnormal liver function tests in 10 of 50 frequent marihuana users. However, all admitted to long-term, regular and heavy use of alcohol. When these subjects abstained from alcohol for one month but continued their usual marihuana usage, evidence of disturbed liver function cleared in nine out of 10 subjects.

Recently, Liskow et al. (1971) reported the appearance of an anaphylactoid reaction in a 29-year-old woman after smoking marihuana for the first time. Skin tests were positive for an allergy to marihuana constituents. Allergy to marihuana, especially in areas of the country where it grows wild, may be more common than generally believed.

Campbell et al. (1971) presented evidence of ventricular dilatation consistent with cerebral atrophy by air encephalography in 10 young males (average age 22) with histories of consistent marihuana use for three to 11 years as well as less frequent use of LSD and amphetamines. The first four of the patients had been referred originally for neurological investigation of behavioral change, memory loss or headache. The remaining six subjects were selected from patients under treatment for drug abuse because of their long history of marihuana use and concomitant neurological and behavioral symptoms.

However, the patients showed personality behavioral and mental disorders, as well as histories of head trauma and psychomotor or grandmal epilepsy that are commonly associated with ventriculographic changes. Also alcoholism can be associated with these findings. Additionally, the authors compared their subjects' ventriculograms with those of normal young adults originally referred for loss of consciousness, syncope and headache without subsequent development of neurological illness.

Thus, the authors demonstrated dilation of the third ventricle, of the frontal or temporal horn, or of the trigone of the lateral ventricle. All of these are commonly associated with personality and mental disorders such as these patients showed. However, whether these changes are caused by marihuana is not proven because no specific neuropathological cause for the cerebral atrophy was identified. Further carefully designed studies are required to clarify this finding.

The LaGuardia Report (Mayor's Committee, 1944) indicated no damage to the cardiovascular, digestive, respiratory and central nervous system, nor the liver, kidney or blood in individuals who had used from two to 18 cigarettes of unknown

potency (average seven) for a period of two-and-a-half to 10 years (average eight). However, this study was not up to modern standards as it lacked double-blind precautions and placebo controls and adequate statistical analysis of the data. Bias was present in reporting. Small numbers of prisoners were used as subjects.

Another less comprehensive American study of 310 individuals who used marihuana on the average of seven years was performed on soldiers (Freedman & Rockmore, 1946). It did not demonstrate any evidence of physical or mental deterioration.

Another team of investigators (Meyer et al., 1971; Mirin et al., 1970) examined a group of 10 male marihuana users (average age 25) who had consumed the drug about 20 to 30 times a month for an average of 4.4 years (one-half to five year range) and had smoked daily for three of the 4.4 years. Heavy use was correlated with psychological dependence, search for insight or meaningful experience, multi-drug use, poor work adjustment, diminished goal directed activity, decreased ability to master new problems, poor social adjustment and poorly established heterosexual relationship. No physical or neurological or psychiatric abnormalities were noted in their work-up.

Indeed, numerous American investigators have not reported abnormalities in baseline examinations of their experimental subjects who have various patterns of marihuana use from very infrequent to many times a day.

GENETICS AND BIRTH DEFECTS

Much concern about possible effects on the unborn generations has arisen because of marihuana's use by persons in their reproductive years. Presently, most studies are preliminary.

There are three isolated case reports in man (Gelehrter, 1970; Carakushansky et al., 1969; Hecht et al., 1968) of birth defects in man in the offspring of parents who had used marihuana and LSD. However, due to their complex gestational histories and the high level of birth defects seen in a "normal" population, a causal relationship cannot be attributed to cannabis or anything else. At present, there is no substantial evidence indicating that marihuana at the dose commonly used is a teratogen in man.

Marihuana has been implicated as a teratogen in animals by several groups at high doses. One study (Miras, 1965) showed reduced fertility in rats impregnated after being fed a diet containing marihuana extract for several months. However, the offspring were normal. The reduced fertility may be related to the finding of marked decrease rate

of cellular division, but without chromosomal damage, when Δ^9 or Δ^8 THC is added to white blood cell cultures (Neu et al., 1969; Martin, 1969).

Dorrance et al. (1970) and Gilmore et al. (1970) detected no significant difference in lymphocyte chromosomes in groups of users and nonusers. No significant differences were found in lymphocyte chromosomes between heavy, long-term Jamaican ganja users and matched non-users. (Rubin and Comitas, 1972)

Pregnant mice injected with cannabis resin on day six of gestation caused stunted but not malformed offspring. Fetal reabsorption occurred when the dose was given on days one to six (Persaud and Ellington, 1967). A second experiment using rats injected on days one to six produced a high frequency of malformed progeny. Another investigator (Geber, 1969; Geber and Schramm, 1969) demonstrated congenital malformations in fetal hamsters and rabbits after large multiple doses of cannabis extract.

Another group (Pace et al., 1971) have administered a wide range of dosages of Δ^8 and Δ^9 THC and marihuana extract by subcutaneous, intraperitoneal and intravenous routes at varying intervals pre- and post-conception to rats, hamsters and rabbits. Δ^9 THC up to 200 mg/kg in variety of dose schedules produced reduced average litter size and stunted pups at high doses but no birth defects. A low incidence of abnormalities occurred in rats and rabbits with marihuana extract, but a high incidence of neonatal deaths was observed apparently due to inadequate maternal lactation.

Studies with radioactive labeled THC (Idänpään-Heikkilä et al., 1969) indicated that it did cross the placenta in high concentrations early in gestation during the developmentally labile phase.

These studies suggest that Δ^9 THC itself is not a teratogen. Instead, perhaps some unidentified substance or substances in the plant extract may be causing the teratogenic effect noted by this group and others when injected. It is uncertain whether this theoretical substance(s) volatilizes during smoking or enters the pulmonary vasculature (Pace et al., 1971).

Consequently, the following FDA label required of many currently prescribed psychoactive drugs warning about use in pregnant women and women of childbearing age appears indicated. "Safe use of the drug during pregnancy and lactation has not been established; therefore, in administering the drug to pregnant patients, nursing mothers, or women of childbearing potential, the potential benefits must be weighed against the possible hazards. Animal reproduction studies have yielded inconclusive results. . . . There have been clinical

reports of congenital malformation associated with the use of this drug, but a causal relationship has not been confirmed."

ORGANIC BRAIN DAMAGE

Deterioration of mental functioning allegedly due to long-term use of marihuana can be subdivided into four major categories: organic brain damage, mental illness-psychosis, amotivational syndrome, and recurrent-phenomena. As with alcoholism, it is quite often impossible to distinguish whether the described effects result from drug use or represent personality traits or changes which would have been present without the drug use.

When marihuana consumption was irregular, mental deterioration was not evidenced (Freedman and Rockmore, 1946) in 310 users with an average history of seven years of use. Sixty-seven heavy users in New York showed no evidence of dementia attributable to drug use although they did have underlying personality disorders. Another investigation (Mayor's Committee, 1944) of individuals who used a daily average of seven marihuana cigarettes (two to 18 range) for average of eight years (two-and-a-half to 16 range) showed no evidence of brain damage or mental deterioration.

Reports from India (Chopra, 1935; Chopra, 1940; Chopra and Chopra, 1939; Chopra, Chopra, and Chopra, 1942) relate minor impairment of judgment and memory, limited self-neglect and insomnia, when potent preparations are consumed regularly in large amounts for many years. No evidence for mental deterioration or brain damage has been noted.

Miras (1967) has described a Greek population of heavy hashish smokers who appear as outcasts from the community after 15 to 20 years of heavy hashish use. They appear mentally sluggish and depressed. They are reported to exhibit laziness, psychic instability, amorality and apparent lack of drive and ambition. Their speech and behavior has been described as peculiar. Some degree of responsibility is retained in that some do work to cover their living and drug purchasing expenses. Some of them are still quite intelligent. Memory is not deteriorated except during the intoxication. They appear overly suspicious. Samples of their electroencephalograms were believed to demonstrate abnormalities.

However, Miras believes that this effect is related to the quantity and frequency of hashish use. He describes three categories of long-term hashish users. Type A uses low doses intermittently and is socially and mentally unaffected. Type B¹ uses low doses daily and no interference is caused in func-

tion. Type B² uses high doses daily causing dependence and performance decrements. Type C uses very high doses daily allegedly causing mental deterioration and abnormal behavior described above. Fink and Dornbush (1971) are currently intensively studying this population. The results will be described in a later section.

Non-differentiated psychosis noted in foreign populations may also be included within this diagnostic category. These will be discussed with the psychosis.

PSYCHOSIS

The alleged connection between mental illness and cannabis derives from Africa, the Middle East and India. These areas are currently developing economically and scientifically, but for many years medical care and especially psychiatric care were given low priority. Many chronic illnesses still persist in these countries which may affect mental functioning. Furthermore, well-trained psychiatrists and methodologists are very rare in mental hospitals in these countries. Consequently, the findings of earlier studies are questionable due to lack of controls, biased sampling and poor data collection and failure to account for variables like nutrition, living standard, cultural factors and socioeconomic status.

India's mental institutions were widely quoted to support the connection between excessive cannabis consumption and insanity. The Indian Hemp Commission performed a thorough and objective investigation of this question, although methodologically it was not up to modern standards. The Commission was unconvinced of the reliability of hospital statistics, where often the diagnosis was not made by a psychiatrist but by a referring policeman.

Therefore, the Commission examined all admissions to Indian mental hospitals for one year. They found that cannabis use could not be considered a factor in more than seven to 13% of all cases of both acute and chronic psychosis.

Chopra et al. (1942) carefully performed the same examination of admission to Indian mental hospitals from 1928 through 1939 when cannabis use was extremely high. They found 600 cases of acute and chronic psychosis which could be traced to cannabis use. Other reports from India have produced varying estimates of the incidence of cannabis psychosis (Peebles and Mann, 1914; Chopra, 1971; Dhunjibhoy, 1930; Evens, 1904). In Egypt 27% to 33% of mental hospital admissions were cannabis related (Ireland, 1893; Warnock, 1903).

Benabud (1957) reported that cannabis users comprised 68% of all mental hospital admissions in Morocco but only 25% of these admissions could be called cannabis psychosis. Watt (1936 and 1961) reported that 2% to 3% of mental hospital admissions in South Africa were due to the use of *dagga* (cannabis).

Boroffka (1966) and Asuni (1964) reported that 14% of psychiatric admissions in Nigeria used cannabis. Toxic psychosis accounted for half of these and cannabis was felt to aggravate underlying schizophrenia in the remainder.

Several statistical studies from other countries including Jamaica, Colombia, Algeria, Panama and Tunisia support this type of data (Prince et al., 1970; Beaubrun, 1971; Allentuck and Bowman, 1942; Bouquet, 1951; Chevers, 1870; Defer and Diehl, 1968; Fraser, 1949; Freedman and Rockmore, 1946; Porst, 1942; Siler et al., 1933; Reales-Aroyco, 1953; Medical Staff, 1938).

Very little information is available on the prevalence of psychosis in the overall population of cannabis users. Chopra and Chopra (1939) classified 2% of the ganja and charas smokers and 0.5% of the bhang drinkers in their sample of 1,200 as psychotic.

Roland and Teste (1958) estimated that no more than 0.5% of *kif* (cannabis) smokers in Morocco suffer from recurrent mental conditions.

Prince et al. (1970), in a study in Jamaica, noted that about 20 patients per year are admitted to mental or general hospitals with acute psychotic reactions allegedly precipitated by ganja. In one general and one mental hospital the ganja smokers comprised 20% of the psychiatric admissions. Furthermore, the percentage of heavy ganja smokers in the community was significantly higher than 20%. Thus, a larger percentage of psychiatric admissions were derived from non-ganja smokers in a comparable lower socioeconomic segment of the population.

This finding contrasts with the 68% prevalence of cannabis use among psychiatric admissions reported by Roland and Teste (1958) which is considerably higher than the prevalence of cannabis use in the general population of Morocco.

Studies based on several hundred cases indicate that the large majority of individuals hospitalized in mental institutions for "cannabis psychosis" have suffered acute toxic psychoses associated with a sharp toxic overdose or massive excesses among habitual users. Occasional smokers and moderate habitual users seldom had psychotic reactions and then only when there were substantial predisposing factors.

The acute clinical picture seen in these—delirium with confusion, disorientation, terror, and

subsequent amnesia—is that of a severe exogenous psychosis. It does not typically involve the type of thought disorder characteristic of schizophrenia. Short recovery times ranging from a few days to six weeks are uniformly reported in sharp contrast to the lengthy recovery period of functional psychoses (Chopra et al., 1942; Roland and Teste, 1958; Defer and Diehl, 1968; Beaubrun, 1971; Stringaris, 1939).

Consequently, the psychiatric literature on cannabis-induced chronic psychosis is quite confused. In general, it appears that cannabis use probably produces a specific psychosis, but this must be quite rare, since the prevalence of psychosis in heavy cannabis users, world-wide, is only doubtfully higher than the prevalence in general populations (Murphy, 1963). However, incidence and prevalence data for these countries on psychosis of users and non-users of cannabis does not exist.

A Moroccan investigator, Christozov (1965), studied 140 chronic heavy hashish users hospitalized in a mental hospital. Their behavior was characterized by a confusional state of consciousness, an impulsivity, an irresponsible attitude, and an instability of mood and character. The patients were often psychotic with persistent hallucinations. Intellectual functions were reduced in over half the cases although this was related to a low intellect prior to drug use. Electroencephalography showed no specific changes. In addition, it was noted that half of the patients were also alcoholics.

The majority of the patients were sedated and showed a rapid improvement, allowing them to be discharged and be employed. Although it appeared that these characteristics are reversible, the patient often returned to heavy drug use again causing return of the syndrome.

Thus, the existence of a more long lasting cannabis-related psychosis is poorly defined. Some evidence indicates the existence of a quite rare slow-recovery, residual cannabis-psychosis following heavy chronic use. Patients often exhibit schizophrenic-like withdrawal, mental confusion and mild residual hallucinations; but there is little tendency for the symptoms to become organized or proliferate. The symptoms develop gradually and then subside gradually before proceeding to full-blown psychotic symptoms. These may produce gradual psychic deterioration in the habitual excessive user after prolonged periods of time. Several authors theorized that the chronic psychosis consists of recurrent acute attacks with gradual deterioration in habitual excessive users

(Roland and Teste, 1958; Chopra et al., 1942; Stringaris, 1939; Sigg, 1963).

Most investigators, therefore, find it exceedingly difficult to distinguish a psychosis due to cannabis from other acute and chronic psychoses because few, if any symptoms, are uniquely found in it and not observed in other psychoses. Often the diagnosis of cannabis psychosis is made because of the history of heavy marihuana or hashish use. Several have suggested that a characteristic cannabis psychosis does not exist and that marihuana will not produce a psychosis in a well-integrated, stable person (Allentuck and Bowman, 1942; Reales-Aroyco, 1953).

In addition, alcohol often played a part in producing the mental derangement (Medical Staff, 1938; Porst, 1942). Most data refers to any form of psychosis in marihuana users; not specifically cannabis psychosis.

Although it is fairly well-established that cannabis use attracts the mentally unstable, the prevalence of major mental disorder among cannabis users appears to be little if any higher than that in the general population. Therefore, true cannabis psychosis must be either very rare or it must substitute for other forms of psychosis. Perhaps, cannabis use alternatively is protecting some less stable individuals from a psychosis (Murphy, 1963).

Because of these many difficulties, the role of cannabis use in acute and especially chronic psychoses in these countries is impossible to determine with certainty.

Finally, the Eastern literature often mentions the existence of a characteristic psychic degeneration among older habitues after prolonged excessive use (Chopra et al., 1942; Christozov, 1965; Indian Hemp Commission, 1893; Roland and Teste, 1958; Stringaris, 1939; Warnock, 1903). They are frequently described as showing a single-minded, carefree state, such as "Kif-happy vagabonds."

Soueif (1967) administered psychomotor and cognitive performance tests to imprisoned hashish users and non-hashish users in Egypt. Preliminary results indicate that, on most of the tests, the hashish sample scored 10% to 20% below the control, and differences were larger for those with higher educational levels. These results do not necessarily indicate a causal relationship. Assessment of the significance of these findings must await further description of the samples utilized.

Experience in the U.S. and Western Europe has not involved a level of marihuana use comparable to the above-mentioned countries. Consequently, the associated chronic psychotic disturbances have not been seen.

In Western countries, Bromberg (1939) and Allentuck and Bowman (1952) reported on acute psychotic episodes with clear-cut onset during the marihuana intoxication. Most symptoms cleared within a few days although several had a prolonged illness. These rare acute psychotic episodes, discussed earlier, have been described recently by a variety of authors in scattered countries (Smith, 1968; Weil, 1970; Bialos, 1970; Keeler, 1967; Milman, 1971; Pesyko, 1970; Kaplan, 1971; Prince et al., 1970; Baker and Lucas, 1969; Grossman, 1969; Beaubrun, 1971; Spencer, 1970).

Some of these reported cases are quite transient and clear rapidly with support of others and may be more like acute panic reaction than psychosis. Still others appear to fit the picture of transient toxic psychosis.

A few cases of marihuana psychosis reported by Kaplan (1971) recovered very slowly after extensive psychotherapy. However, the high incidence of schizophrenia and borderline states described in these patients and their families may indicate that marihuana use merely aggravated or precipitated an underlying psychosis in these individuals.

George (1970) reported a case in Britain in which an acute episode of confusion, disorientation, hallucination, anxiety, paranoia, agitation and memory loss related to cannabis use was followed by a more chronic schizophrenic-like syndrome with thought disorder, incongruous affect and hallucinations. This individual was experiencing considerable financial and marital stress prior to these two separate acute episodes. The chronic condition eventually responded to psychotherapy.

Bernhardson (1969) reported aggravation by cannabis of schizophrenic conditions in several Scandinavian patients. Perna (1969) reported a case in which marihuana appeared to aggravate an extended psychosis for which the patient had required psychiatric treatment prior to the use of marihuana.

Keup (1970) reported 14 cases of prolonged psychotic symptoms requiring hospitalization associated with the use of marihuana. He noted evidence for the existence of a high level of psychopathology in many of them which predated their marihuana use.

Kolansky and Moore (1971) in a widely publicized report of cases of individuals ages 13-to-24 has claimed profound adverse psychological effects from smoking marihuana two or more times a week.

Of 38 individuals reported, all had decompensated personalities, eight had psychoses (four attempted suicide) and 13, according to the authors

became sexually promiscuous due to marihuana. These clinical impressions were all based on, at most, a few interviews with the individuals who were referred to these psychiatrists for consultation for problems (including one-third by legal authorities after arrest for possession of marihuana).

Unfortunately, the authors made sweeping generalizations to all young adolescent marihuana users from this biased and non-representative sample. No attempt was made to interview other young marihuana users who have not been referred for psychiatric help, and the high prevalence of promiscuity and psychopathology in comparable adolescent populations was totally disregarded. In addition, case histories of previous mental health were obtained retrospectively from the patient, their families or the referral source.

Thus, it is impossible to state unequivocally, as the authors do, that since marihuana use and psychiatric problems occurred at the same time, the former is causative of the latter.

Several authors have reported acute toxic psychosis following marihuana use by soldiers in Vietnam (Talbot and Teague, 1969; Colbach and Crowe, 1970; Bey and Zecchinelli, 1971).

All these cases represented transient reactions and cleared rapidly with treatment. In many cases, personality disorders or borderline personality states appeared to be predisposing factors in the development of the psychotic state. Often revealed were problems of identity diffusion, ego weakness, low self-esteem and inability to form close interpersonal relationships. Also the stressful conditions of the setting in which the drug was used deserves emphasis.

Halikas et. al. (1971, 1972) performed intensive psychiatric interviews on a population of 100 regular marihuana users and a control group of 50 of their non-using or casually using friends. Half of each group met the criteria for some psychiatric diagnosis. Psychiatric illness and anti-social behavior most often preceded marihuana use.

Some attempts have been made to estimate the incidence of psychosis and other adverse reactions to marihuana in Western countries. Obviously, such estimates depend on how these reactions are defined—one questionnaire study of 2,700 psychiatrists, psychologists, internists and general practitioners in the Los Angeles area reported 1,887 “adverse reactions” to marihuana in an 18-month period (Ungerleider et al., 1968). Adverse reactions were not defined by the authors in the survey. Those reported ranged from mildly unpleasant parental objections to use to severe anxiety or acute psychosis.

Keeler (1967) reported on “adverse reactions” to marihuana (paranoid feelings, etc.) which are limited to the immediate period of intoxication. These phenomena occasionally occur in such a light proportion of regular users that they are of little interest in the present discussion, e.g., 80% of users report they sometimes have paranoid reactions during the marihuana intoxication (Tart, 1970).

Other estimates have been based on hospital admissions in which marihuana use was the recognized precipitating cause. Lundberg et al. (1971) reviewed the admission records for the Los Angeles County General Hospital for the period 1961–1969 and found marihuana use was listed as the reason for admission in only nine out of 700,000 cases, and five of these were for intravenous injections.

Keup (1970) reports that 0.9 per 1,000 of the 1968 admissions to a Brooklyn psychiatric hospital were directly related to cannabis use, and in another 1.9 per 1,000 it was found to be a contributory factor.

In 1966, psychiatric hospitals in England listed 82 admissions for which cannabis use was considered a factor (Baker and Lucas, 1969); in 1967, the number was 140 (George, 1970). For the 1966 data, further analysis revealed that eight of the 82 cases were acute psychotic reactions to cannabis, 20 were related to “cannabis addiction as a way of life,” and cannabis could not be established as a definite factor in the remainder (Baker and Lucas, 1969).

Colbach and Crowe (1971) estimate that among a population of 45,000 U.S. soldiers in Vietnam in 1969, some 40 to 50 per month were hospitalized for psychiatric reasons and about five of these were associated with (usually heavy) marihuana use.

Among college populations, Pillard (1970) estimates five to seven marihuana-associated anxiety reactions are seen per year by the Boston University Health Service which cares for a student population of 20,000; and Bialos (1970) reported 11 cases during a one-year period (1968–1969) for a student population of 8,500.

If it is assumed that about one-third of the Vietnam and college populations are using marihuana to some degree, the annual incidence of hospitalized cases in Vietnam would be about four per 1,000 users; the rate for student-health cases, 0.3 to 1.3 per 1,000 users.

The 1972 Secretary of Health, Education and Welfare's report on *Marihuana and Health* prepared by the National Institute of Mental Health noted in summary that marihuana can clearly precipitate certain less serious adverse psychiatric

reactions, such as simple depression and panic, particularly in inexperienced users.

In these reactions, non-drug factors may be the most important determinants. Psychotic episodes may also be precipitated in persons with a pre-existing borderline personality or psychotic disorder or those persons under excessively stressful conditions. These acute psychoses appear to share considerable clinical similarities with the acute toxic psychoses noted in the Eastern literature. Both these psychoses resemble an acute brain syndrome in that they occur primarily after heavier than usual usage and are self-limited and short-lived after the drug is removed from the body.

Some reports describing a prolonged psychotic course after an initial acute episode cannot rule out the role of pre-existing psychopathology. At the present time evidence that marihuana is a sufficient or contributory cause of chronic psychosis is weak and rests primarily on temporal association. This issue may be clarified by extensive epidemiological and controlled clinical studies. (Secretary, HEW, 1972)

AMOTIVATIONAL SYNDROME

Another type of possible mental deterioration or subtle personality and behavioral changes associated with heavy long-term cannabis use is the amotivational syndrome.

This syndrome has been described world-wide in its extreme form when the most potent preparations are used (Miras, 1967; Chopra and Chopra, 1957; Chopra et al., 1942; Christozov, 1965; *Indian Hemp*, 1893; Benabud, 1957; Warnock, 1903). Its most extreme form depicts a loss of interest in virtually all activities other than cannabis use. The resultant lethargy, social and personal deterioration and drug preoccupation may be comparable to the skid row alcoholics' state.

Benabud (1957) describes the occurrence of this syndrome in individuals chronically intoxicated with hashish. These individuals are unlikely to show conventional levels of motivation. Also the time required to obtain and consume enough drug to maintain this state is not likely to leave much time for other pursuits. The passive user tends to lose interest in work and other long-term goals.

The question of whether there exists a significant causal as opposed to an associative or correlational relationship, only attracted attention when the traditionally achievement-oriented Western youth adopted cannabis use. The traits of passivity or amotivation are commonly described among heavy cannabis user throughout the world.

A number of Eastern authors have expressed the opinion that this is a result of organicity from

chronic cannabis use in large amounts, without objective studies being performed.

Recently the term has been used to describe the behavior of numbers of young Americans who are for a variety of reasons dropping out of school, refusing to prepare themselves for traditional adult roles and smoking marihuana.

This type of social maladjustment is not comparable in magnitude to that described in other cultures. However, the individual may lose the desire to work, to compete, to face challenges. Old interests and concerns are lost and the individual's life becomes centered around his compulsive drug use. In addition, the individual may ignore personal hygiene, experience loss of sex drive and avoid social interaction (Mirin et al., 1970; Smith, 1968).

West (1970) and McGlothlin and West (1968) have described a clinical syndrome as a result of observations of regular marihuana users for four years. Their clinical impressions are that these individuals show subtle changes in personality over time which might represent an organic syndrome. These include diminished drive, lessened ambition, decreased motivation, apathy, shortened attention span, loss of effectiveness, introversion, magical thinking, derealization and depersonalization, decreased capacity to carry out complex plans or prepare realistically for the future, a peculiar fragmentation in flow of thought, and a progressive loss of insight.

Another psychiatrist, Powelson (1971), has also concluded on the basis of over five years clinical experience with drug users at the University of California, Berkeley, that the effects of marihuana are cumulative. He feels that after a period of prolonged use a disorder of thinking characterized by a lack of coherence and a pathological thinking process results.

These disturbing findings are being reported more frequently, especially in adolescent and young-adult groups. Recently, tentative and preliminary data (Francois et al., 1970; White et al., 1970) has been presented on a group of 19 hospitalized 14-to-20-year-old patients with behavioral disorders who had used marihuana and other drugs heavily.

In addition to "amotivation," they showed primitive and magical modes of thought and low frustration tolerance. Subtle EEG patterns were detected although this finding is not uncommon in adolescents with behavior problems.

The researchers are presently carrying out a study in non-hospitalized adolescents without behavioral disorders who have similar patterns of drug use in order to clarify their findings.

Kornhaber (1971) believes that at least twice-daily marihuana use for a year, in a 13-to-18-year-old population, has a deleterious effect upon the developing adolescent. The intoxicated state facilitates a regression from logical-mathematical thought processes to a more primitive conceptual mode of fantasy and magical thinking and impairs learning ability and judgment by decreasing attention and concentration. Thus, the developing youth turns away from reality toward fantasy and from structure and activity to passive dependency.

Kornhaber suggests that marihuana facilitates the development of normal adolescent turmoil into a pathological state. However, he feels that the existence of the syndrome depends partially on the individual's vulnerability to the drug influence.

A possibly milder variation of this syndrome has been clinically observed by Scher (1970) in individuals in the 20-to-30 age group who have used marihuana daily for five years while apparently functioning normally in society with good jobs, often creative ones. These individuals begin to experience a vague sense of functioning at reduced efficiency level. Thus, the disabilities experienced are personal and internal and constitute a vague neurotic depressive-like syndrome.

In addition to the methodological problems of establishing causative as opposed to associative relationships, it is also very difficult to obtain a sample of heavy cannabis users in the West who have not had substantial experience with other drugs, especially the strong hallucinogens.

Kornhaber (1971) has described a sample of 50 adolescent psychiatric patients who used marihuana daily and also took other drugs. He concluded that marihuana exercised a "chronic, tranquilizing, psychomotor-depressant effect" among these patients, and facilitated regression, fantasy and magical thinking. School performance, participation in sports, and personal hygiene also declined. He reported improvement in school performance, mood and the underlying depressive symptoms for many patients four to six weeks after discontinuing marihuana use.

Given there is a fairly strong tendency for heavy cannabis users to be passive and apathetic, to emphasize the present over the future, and to choose fantasy over rationality, there are several ways by which this relationship might come about (McGlothlin, 1972).

First, persons who already exhibit these traits may simply be attracted to the use of cannabis. Sociologists tend to favor this explanation, arguing that the relationship between cannabis use and

various behavioral indicators is not causal, but simply one manifestation of a general pattern of youthful deviance or rebellion (Goode, 1970).

Utilizing a large sample, Johnson (1971) found that marihuana use is associated with impaired school performance and several forms of deviance; however, other indicators such as premarital sex and high school truancy predicted the dependent variable as well or better. Tobacco and alcohol use were nearly as good predictors as marihuana.

A second related explanation is that the illegal context in which the drug is taken forces the adoption of a non-conforming life style. The user is thus further alienated from the dominant culture through his close ties with the cannabis-using group.

Third, cannabis use and associated activities may largely substitute for other interests. The individual may focus so much of his time and energy on cannabis that he has little time for other endeavors.

Fourth, heavy cannabis use may act pharmacologically to produce a chronic tranquilized state. Although the acute phase of intoxication is relatively short, there is some evidence of a lethargic hangover effect (Haines & Green, 1970).

Fifth, personality and behavior changes may result through the routine process of learning via exposure. If an impressionable youth spends a great deal of his time in the world of cannabis intoxication, he may learn to think in a similar manner when not intoxicated. In particular, he may learn to choose the drug fantasy as an alternative to solving personal problems and facing adult responsibility.

A related explanation is that cannabis acts as a catalyst, creating a condition which facilitates change, providing other necessary conditions are present. Cannabis, along with the strong hallucinogens, produces a kind of mind-loosening effect in which mechanisms providing structure and stability to perception of self-image, environment, time sense, etc., are temporarily suspended.

The more frequent users welcome this effect and report utilizing the loosening effect of the drug to achieve further personality change in the direction of less conformity and more spontaneity, that is, the "hang-loose ethic" (Suchman, 1968; Simmons and Winograd, 1966).

In addition, the cannabis intoxication produces a heightened suggestibility which likely makes the user more amenable to adopting the attitudes and values of the subculture in which the drug is taken. At a minimum, it may be concluded that the effects of cannabis can reinforce and provide a rationalization for previously existing tendencies.

Finally it is possible that chronic cannabis use can result in organicity (Soueif, 1967).

In summary, if cannabis use produces personality and behavior changes via one or more of the above mechanisms, the extent of such changes is likely to be strongly related to the amount consumed and the age of the user. According to evidence found in Western literature, frequent use may be quite disruptive during the formative years of adolescence.

On the other hand, the Eastern literature indicates that, although the very heavy user (200 mg. THC or more per day) is largely incapacitated, manual laborers often function adequately while consuming amounts containing 30 to 50 mg. THC per day (Roland and Teste, 1958; Chopra and Chopra, 1939). Similarly, many musicians and entertainers in the United States have lived productive lives while using marihuana (Winick, 1960).

RECURRENT PHENOMENON

Another poorly understood phenomenon is the spontaneous recurrence of all or part of the drug-intoxicated state (somatic and visual sensations) when not under the influence of the drug. This phenomenon has been called a "flashback" when it occurs spontaneously or "a contact high" when it occurs in the presence of others who are intoxicated.

Flashbacks have been reported with marihuana use alone. However, these occurrences are apparently predominant in marihuana users who have taken hallucinogenic drugs previously. These marihuana users occasionally find that marihuana highs change for them after their hallucinogenic experiences. For example, a simple hallucination experienced previously may reoccur while high on marihuana.

These flashbacks may be interpreted as pleasant, even desired experiences by some but unwelcome and disturbing to others. The recurrences are benign in most individuals and tend to disappear as the hallucinogenic experience recedes in time (Keeler, 1967; Smith, 1968; Weil, 1970; Bialos, 1970; Blumenfield, 1970).

Truly vivid experiences which recapture most of the elements of the original experience are extremely rare (Smith and Mehl, 1970). More often they resemble an anxiety state occurring after an unpleasant high or the recurrence of a new perceptual awareness gained while high. It is difficult to differentiate these recurrences from the not uncommon *déjà vu* phenomenon in which a person has the illusion that a perceived situation has occurred before. These recurrences are intermittent

and usually occur within a few days to weeks following the use of marihuana.

Investigations of Very Heavy, Very Long-Term Cannabis Users

Proving a causal relationship between the use of any substance and an associated illness or condition is extremely difficult. Ideally, prospective longitudinal studies on large populations of both substance users and non-users matched for socioeconomic and psycho-cultural variables should be performed for many years in order to detect subtle or cumulative effects. Unfortunately, the enormous expenditures of research effort and finances that would be required for a large scale investigation of this nature are prohibitive.

Consequently, carefully designed and controlled, clinical and epidemiological studies of very heavy, very long-term cannabis users in foreign countries must be relied upon to provide important data on possible effects because these populations are not obtainable in the United States.

GREECE

Preliminary results (Freedman and Fink 1971, Fink and Dornbush 1971, Fink 1971) from an intensive medical, neurological, and psychiatric study of 31 male chronic hashish users in Greece, performed under contract to the National Institute of Mental Health, have revealed few abnormalities in these individuals. Non-users matched for socioeconomic and psycho-cultural factors including life style, alcohol and tobacco consumption and nutrition and general health have not been studied.

In collaboration with Professors Miras and Stefanis in Athens, Fink and co-workers are studying a population of chronic hashish users that Professor Miras has known for many years. The population studied is composed of 31 male subjects ranging in age from 26 to 69 years with a mean of 46 years.

The subjects report starting hashish use at 13 to 35 years of age with a mean of 19. They have used hashish from 10 to 49 years, with a median of 28 years. In the past they used an average of eight grams of hashish daily with a range of 2 to 24 grams daily. (The hashish is estimated to contain 4% THC on the average. Therefore, average daily use was 320 mg. of THC).

In the past, 27 of the subjects were daily users and four used every other day. Frequently of hashish use per day was: once per day—2 subjects, twice per day—6 subjects, three times per day—

14 subjects, four times per day—4 subjects, and five or more times per day—5 subjects.

The men reported a reduction in drug use with time ascribed to increasing difficulty in obtaining adequate supplies due to increased enforcement of the drug regulations. At present they use an average of three grams of hashish daily (320 mg. of THC) with a range of one to 10 grams daily.

Twelve now use hashish daily, eight use every other day and 11 use less frequently. Frequency of daily hashish use is: once per day—5 subjects, twice per day—12 subjects, three times per day—10 subjects, four times per day—2 subjects, and five or more times per day—2 subjects.

The men are primarily hashish users. One has used opiates. Two are heavy users of alcohol and six report occasional to frequent use of alcohol at the present time. Tobacco is smoked by all subjects averaging 40 cigarettes per day.

Twenty-three of the subjects report periods of abstinence from hashish averaging ten months but up to three years. Hashish use is primarily social by 20 subjects, and 15 subjects smoke in solitude.

Pipes and cigarettes in which hashish is mixed with tobacco are used interchangeably. The usual time of smoking is after work (21 subjects) but 12 subjects smoke before work and five smoke anytime.

In this population, the median education is three-and-a-half years of school with a range of none to nine. Five of the men are illiterate. Twenty-one of the men are married, one is cohabiting, four are single and five are divorced or separated.

All of the married men are employed and support their families. The subjects report changing their jobs frequently and 11 had periods of unemployment from three to 120 months. Ten were classified as skilled workers and 21 as unskilled workers. Their jobs include selling scrap metals, general labor, cartage, messenger, maintenance assistants, etc.

Arrests are common and 19 report at least one non-hashish related arrest. Eighteen have been in regular military service, six were exempt because of hashish use and seven for other reasons.

Interestingly, 10 of the 15 wives interviewed prefer the behavior and attitudes of their husbands when they are using hashish compared to when they are drug-free.

In regard to family and personal background 20 had refugee parents, 13 had alcoholic or hashish using fathers, 26 had three or more siblings, 19 had dominant mothers. Fifteen of 21 had dominant wives. Seven reported broken homes under age 16.

Apparently, the subjects participation in society is consistent with their lower socioeconomic background. No gross behavioral deviation was detected in this population.

Psychiatric status was evaluated by history and psychiatric interview. Nine have had psychiatric hospitalization of which three were in the military and related to hashish use. Two have had psychiatric outpatient treatment. Eight had histories of neurotic traits during childhood. In their psychiatric evaluation, three men are considered to have psychiatric pathology. Two of these were considered sociopaths on the basis of homosexuality and criminal behavior. The third was diagnosed as a schizophrenic. No overt signs of any organic mental syndrome were detected. None of the three men were believed to require psychiatric intervention. The schizophrenic, although suspicious and withdrawn, is a successful business man and lives with his family on weekends.

Complete physical and neurological examination revealed three prominent findings. All had very poor dentition which the men ascribed to hashish smoking. Chronic bronchitis was detected in 14 of the men and emphysema in three others. This finding is not surprising because all subjects were tobacco cigarette smokers averaging 40 cigarettes per day, in addition to their very heavy hashish consumption. Enlarged livers were also found in nine of the 31 subjects.

Because no extensive psychological test battery has been developed or standardized in Greece, American tests were used. These tests are not culture-free, and it is possible that certain items or subtests were inappropriate for the subjects because they had not acquired the type of knowledge or skills required due to their poor level of education.

The Wechsler-Bellevue I.Q. tests were translated into Greek and administered. Because of these factors, comparison of level of performance between these subjects and white middle class Americans is meaningless.

The mean I.Q. is 86 with a range of 69 to 109. The mean verbal is 90.3 and the mean performance was 83.6. The group of subjects performed lower than expected on digit symbol, digit span and similarities but higher than expected on comprehension, arithmetic, vocabulary and picture completion. The Ravens Progression Matrices showed a similar pattern and mean I.Q. The significance of these findings will depend on a comparison with a matched non-user population.

Resting electroencephalograms were obtained in 30 subjects and evaluated independently by four experts. Twenty-five were within normal limits.

Testing was incomplete in one record. One record in a subject who had a head injury within the prior three months showed focal slowing.

Two of the four experts judged the remaining three records as showing low degrees of average to low voltage theta activity indicative of cerebral dysfunction. The remaining two experts judged these records as within normal limits.

This medical and psychological data suggests some effects of very long term, very heavy hashish use. Without a matched comparison group, factors independent of hashish use, such as age, socio-economic conditions, or environmental conditions, may account for the observed changes.

However, the researchers note that these men have survived chronic hashish use in high doses without gross behavioral deviation.

JAMAICA

Another foreign investigation (Ruben et al., 1972) conducted in Jamaica (under contract for the National Institute of Mental Health) studied chronic cannabis users and matched non-user controls. Preliminary findings have shown little evidence of significant differences between the two groups in the extensive anthropological, medical, psychiatric and psychological investigations.

Ganja use is widespread and endemic in the Jamaican lowest socioeconomic strata, and in particular in a millennial-religious sect known as the Rastafarians. More than 50% of all male Jamaicans are estimated to use some form of cannabis, and probably about 20% are regular heavy users of ganja.

The drug was brought to Jamaica from India over 130 years ago by indentured East Indian laborers. However, presently the heaviest ganja users are Afro-Jamaicans who comprise 90% of the population.

The Rastafarian religious sect, founded by Marcus Garvey, preach a "Back to Africa" destiny and claim Haile Selassie to be God. The Rastafarians have always worn long hair and beards and dressed eccentrically. They believe that "the herb" was given them by God to help them to understand his wisdom exemplified in their greeting, "Peace and Love."

The Rastas reject the values of the dominant society and regard the government as "the powers of Babylon". They have chosen to opt out of conventional society and instead work and live in a communal existence in poverty. They emphasize the value of ganja in achieving a new level of meaning in this existence.

The Rastafarians add ganja to their infants first bath and start feeding the drug to their

infants from the time of weaning in an infusion known as ganja tea. They continue to smoke and drink the drug throughout life.

They, like many other Jamaicans, believe in its medicinal properties especially for asthma and indigestion and promotion of healing; that it gives protection from evil spirits; that it cleanses the skin and purifies the blood; that it promotes sexual vigor; that it gives energy for work and relieves fatigue and provides relaxation after work.

Extensive in-depth studies have been carried out by a team of anthropologists from The Research Institute for the Study of Man in conjunction with The Departments of Psychiatry, Pathology, Physiology and Medicine of the University of the West Indies. Anthropology field workers lived for extensive periods of time in five rural communities (including fishing, farming and cane cutting areas) and two urban districts.

Over 2,000 people were observed and studied in these communities. Overall life styles of the ganja users were not notably different from non-using individuals in the Jamaican lowest socioeconomic strata. Users are working, maintaining stable families and homes, and actively participating in their society. No evidence was noted of crime or aggressive behavior or drug use other than alcohol related to ganja use. No evidence of physical dependence was demonstrated. Minimal psychological dependence was observed but no drug craving was expressed.

Thirty long-term ganja smokers and 30 non-users matched demographically to control factors other than ganja use, were chosen as representative of this functioning lower socioeconomic population and selected for intensive hospital study in order to determine differences between the two groups.

The mean age of the subjects was 33 with a range of 23 to 51. The primary occupation of one-third of the subjects was farming. The next most common occupations were fishing, skilled and semi-skilled laborers. Half practiced no formal religion, five were Rastafarians and the remainder practiced a wide variety of traditional religions. Almost three-fourths of the males had stable "marriages" and the remaining single subjects were predominantly the younger ones.

The subjects were divided into three groups. Twenty-three were nonganja smokers, 28 were regular daily ganja smokers and 9 were occasional ganja smokers using the drug several times a week or less. Three types of regular ganja smokers were delineated: light smokers using one to four spliffs daily; moderate smokers using four to seven spliffs

daily; and heavy smokers using eight or more spliffs per day.

Age of first use ranged from 8–36 years of age. Regular use of ganja occurred at a median age of 16 years with a range of 9–25 years. All ganja smokers had used the drug at least 7 years and some up to 37 years with a mean of 17.5 years.

The ganja users consumed on the average seven spliffs of ganja daily with a range of one to 24 per day. The typical ganja cigarette or cigar, termed a spliff, is roughly a four-inch-long paper cone and contains about two to three grams of ganja with a delta 9 THC content of about 2.9% on the average (range of 0.7–10.3%) mixed with about half of a Tobacco cigarette. Also many smoke ganja in a Chilum pipe using very deep inhalation to fill their lungs with smoke. They consume 14 pipe fulls per week on the average, with a range of 1–25 per week.

No significant differences in neurological abnormalities, electroencephalographic abnormalities, hemochemical changes including liver function, urinalysis, chest X-ray abnormalities or chromosome damage in lymphocytes were found in the users or controls.

One user had a long history of bronchial asthma and another had a mild case of Jamaican neuropathy, but nothing suggests these disabilities were in any way related to ganja use. Minor electrocardiographic abnormalities were present in about one-third of both users and controls. This may be related to a syndrome of unknown etiology known as Jamaican cardiomyopathy.

Thorough physical examination and hematological studies revealed only minimal significant differences between ganja smokers and non-ganja smoking controls. Comprehensive evaluation of red blood cell indices revealed that the ganja smokers had significantly higher hemoglobin levels and packed red cell volumes (hematocrit) than the non-ganja smokers.

These hematologic findings are compatible with those reported recently (Sangan and Balberzak, 1971) for heavy tobacco cigarette smokers. The authors noted that cigarette smoking causes a functional tissue hypoxia due to deficits in lung function with resultant arterial oxygen unsaturation. Thus, an increased demand is placed on the bone marrow to provide more red blood cells to increase the oxygen carrying capacity of the blood.

In addition to the heavy smoking of ganja in spliffs and pipes, 27 of the 30 ganja smokers were tobacco smokers, and several have smoked tobacco cigarettes heavily. 19 of the 30 non-ganja smokers were tobacco cigarette smokers and tended to be light tobacco cigarette smokers.

Thus, the data appears to suggest that a combination of factors including number of years and quantity of cigarette smoking, ganja spliff smoking and ganja chilum pipe smoking is significantly correlated with the hematological changes indicative of functional hypoxia. However, pulmonary function studies did not demonstrate significant decrements correlated with ganja or tobacco smoking.

No significant differences were found between groups by a thorough psychiatric and psychological examination. All subjects were judged to be in normal mental health. Subjects were administered a battery of standardized reliable American psychological tests known to be sensitive to impairment in brain function. These tests were not culture free so that comparison of performance between Jamaicans and Americans is meaningless. Nineteen tests evaluating 47 variables were performed including one personality test, three tests of intelligence and verbal abilities, and 15 neuropsychological tests.

Two of 47 variables had statistically significant differences between ganja smokers and non-smokers. The smokers scored higher on the digit span subtest of the Wechsler Adult Intelligence Scale and had a more centralized personality organization on the Lowenfeld Mosaic Test.

Non-smokers had the best performance on the number of edge contacts with the non-dominant hand on the Holes Test. These few significant differences were considered chance findings by the investigators.

In general no consistent differences were found on these psychological tests between ganja smokers and non-smokers. The data clearly indicate that the long-term ganja use by these men did not produce demonstrable intellectual or ability deficits when they were without the drug for three days. No evidence in these results suggest permanent brain damage.

The alleged role of ganja in producing personality change in the direction of a loss of competitive striving and an unwillingness to work, termed the amotivational syndrome was also investigated.

Based on clinical impressions gained from careful sociological and psychological techniques, the investigators noted that the chronic ganja smoker differed little in work habits or record from his matched control. No evidence of an amotivational syndrome was found. In fact, the subjects believe ganja has a functional value as a work adjunct. It provides energy for work and helps them do arduous boring jobs.

In the Jamaican culture, ganja may produce a "motivational syndrome". In an objective video-

tape evaluation of work energy output and ganja smoking, ganja use did not lower productivity on simple repetitive tasks, such as wood-cutting which requires compulsive concentrated effort.

A study of cultivators points up the relationship of population, land, and economic pressures to ganja use. In the area studied, land resources are scarce, farms small and cultivation difficult on the hilly slopes. Market conditions determine income from cash crops and restrictions on migration maintain population pressures on limited resources.

For these farmers, the researchers suggest that ganja use decreases total cultivated acreage and consolidates production while disruption of competition and social cohesiveness among the farmers is avoided.

These data may indicate that heavy ganja use during cultivation in farming situations with limited alternatives may serve to maintain the status quo. However, it is possible that the compulsive concentrated effort experienced by the cultivators with heavy ganja use may be productive in areas with good soil and climatic conditions where systematic weeding can increase crop yields.

As a result of the extensive anthropological study, the investigators believe that ganja use in Jamaica is a culturally determined phenomenon. A "ganja complex" exists which consists of closely related, learned patterns of behavior manifested by the members of the society.

The ganja complex appears to be functional for the working-class Jamaican. Various elements of the complex including economic, social and personal are interrelated in ways that contribute to operation of the whole culture.

AFGHANISTAN

Dr. Salamuddin Weiss (1971) studied 1011 chronic hashish users in Kabul in order to obtain a general picture of the charas habit in Afghanistan.

Cannabis is cultivated in this tropical country. A concentrated product, charas, the resin obtained from the flowering tops of the female plant, is the preparation generally used. The most common method of smoking charas is in a clay water pipe called a Chelum. Next most commonly used is a pipe or needle and straw. Infrequently, charas is smoked in tobacco cigars or cigarettes. Chewing the leaves or drinking a charas mixture as a confection is quite rare.

Although charas smokers are found throughout society, they are predominantly found in certain groups. The ages of the subjects studied ranged

from 13 to 70 years old. More than 75% were married. Almost all were males.

Socioeconomic status was as follows: 70% lower, 28% middle and 2% upper. 82% are illiterate, 27% had a primary school education and less than 1% had any higher education.

Most smoking occurs in groups of two to 20 friends in quiet out of the way places. Most users smoke several times a day. The longer one has smoked charas, the shorter the duration of the high and the more often the individual can smoke each day.

Weakness, sexual difficulties and physical impotence are commonly reported by smokers. Most report they have a good appetite and eat more than normal, but malnutrition is common.

One hundred chronic smokers were selected at random and examined medically: 93 were malnourished; no evidence of illness was found in 79 subjects; 13 showed signs of respiratory illness (bronchitis); 7 showed sleep disturbances and one had pulmonary tuberculosis. No deaths have been reported from charas overdose. One subject out of the 1,011 was known to be chronically psychotic.

A review of over 150,000 outpatient and inpatient psychiatric visits per year over the past 10 years revealed 20 short-term psychotic episodes yearly involving charas alone and 16, short-term psychotic episodes yearly involving both charas and other drugs. An absence of chronic mental illness related to charas use was noteworthy.

Most charas smokers commence use during their teens, gradually increasing their use about five or six times until they reach their highest dose between the ages of 20 to 40 years.

At the extreme, smokers have raised their daily dosage up to 10 times their starting dose within the first two years. They then gradually decrease their daily requirement by about 50% upon reaching their 60's. Generally, most smokers cease charas use after their 60's, but some use extremely low doses for the rest of their lives.

These patterns of use are consistent with the development of tolerance. Additionally, chronic smokers note they are able to use larger doses than they did when they began use without any significant signs of intoxication. Also after stopping charas use for a few days or months, the users report they restart use at smaller doses to achieve the desired effect.

No physical dependence was noted. Marked psychological dependence was present which makes it difficult to stop their habitual use. Discontinuation of charas use produced mild psychologic

abstinence signs. These signs, generally include restlessness, loss of appetite, sleeplessness, nervousness, headache, and gastrointestinal upset.

Most smokers after discontinuation of use are quite able to live with their families and perform their jobs without discomfort. Most chronic smokers return to charas use within days or months. Out of a group of 100 randomly selected ex-smokers who had used for eight to 22 years, 42 have not returned to charas use, 16 use occasionally and 42 have returned to daily use within one to 13 months.

Most common explanation given by the subjects for restarting use were to continue close relationships with charas using friends and lack of a busy job.

A group of 100 opium addicts were selected at random from the community; 51 of these started their drug use with charas and later substituted opium for charas.

Generally, charas smokers report that they become faster in their daily jobs, but observation reveals a slowness in these activities. The ability to perform a non-complicated job is comparable to non-charas smokers. They tend to be cooperative but lazy persons. They tend to be more theoretical than practical and avoid making decisions. They do not demonstrate creativity or contribute significantly to the improvement of their community.

Summary

Marihuana has been used by man in countries around the world for many centuries. Scientifically, more is known about marihuana's effects than many other botanical substances consumed by man.

Marihuana is one of several preparations from the plant, *cannabis sativa*. The plant contains many different chemicals, but tetrahydrocannabinol appears to be the major active psychopharmacologic ingredient. The potency of the preparation is determined by the THC content, which varies according to the origin of the seed, the conditions of cultivation, and the extent of manicuring.

Several important factors exert significant influences on the psychopharmacological effect. These include dose, method of use, set and setting, and pattern of use-including frequency and duration of use.

The acute subjective experience is dose-dependent. At low doses commonly used in this country a mild intoxication occurs, but at higher doses psychotomimetic experiences can occur. Few con-

sistent physiological effects are noted. No pathologic bodily changes have been conclusively demonstrated from acute use. Subtle effects on recent memory, psychomotor function, and social behavior have been demonstrated.

The margins of safety between the effective dose and the toxic dose is quite large. No human fatalities have been noted in this country caused by marihuana. The most common adverse reactions are becoming too intoxicated, and the acute anxiety-panic reaction. Both of these are transient and related to dose consumed as well as set and setting factors.

Acute psychotic reactions are quite rare. They usually last a few days to weeks and occur in predisposed persons either with preexisting mental disorders or borderline personalities especially under stressful conditions. Transient acute brain syndrome or toxic psychosis is possible at extremely large doses.

Evidence has accumulated which indicates that differential tolerance does develop at least in persons who smoke large amounts of marihuana several times a day. Development of tolerance to the depressant effects on behavior appears to precede development of tolerance to the intoxicant effect.

Physical dependence has not been demonstrated. Little, if any, psychological dependence is present in most intermittent marihuana users. Moderate psychological dependence occurs in moderate to heavy users and marked psychological dependence has been described in very heavy chronic users.

Some detrimental effects have been conclusively linked to short- and long-term marihuana use for very heavy users. The most frequently reported change in the heavy, long-term smokers of large quantities of potent preparations is chronic bronchitis comparable to that developed by a heavy, long-term tobacco cigarette smoker. A chronic cannabis psychosis probably occurs rarely in heavy chronic hashish smokers in Eastern countries. Most psychotic episodes are the acute variety and clear in a few days to weeks. No objective evidence has been demonstrated that even very heavy, long-term hashish use causes organic brain damage.

Objective studies of chronic, heavy smokers of potent preparations have not causally linked this drug with the amotivational syndrome which has been described by many clinicians. Almost all chronic, heavy hashish smokers are indistinguishable from their peers in the lower socioeconomic strata of their respective societies in social behavior, work performance, mental status and overall life style.

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III.

Behavioral and Biological Concomitants of Chronic Marihuana Smoking by Heavy and Casual Users

The Commission was directed by Congress to conduct "a study of the pharmacology of marihuana and its immediate and long-term effects, both physiological and psychological."

A comprehensive review of the literature was undertaken to determine the specific areas of social and medical relevance in which inadequate information was currently available. An abundance of descriptive and laboratory data was available on the pharmacology of marihuana, especilly relating to immediate effects. However, few studies were available in the area of biological and behavioral effects of repeated use of marihuana over a long-term or even a short-term.

Ideally, studies of this nature should involve a comparison of a representative sample of users with an appropriately matched sample of non-users; also, both samples of individuals should be followed for many years in the community in order to distinguish causes from consequences. In practice, identification of a representative sample of users is frustrated by the fact that the universe of all users is not known, partly due to the illegality of the drug. Consequently, for ethical and practical reasons, experimental, clinical studies must utilize volunteers with previous drug experience.

In recent years, National Institute of Mental Health has funded such investigations in countries

where cannabis has been used heavily for many years; in particular, studies are currently underway in Jamaica and Greece, and the Commission has had access to this data on a continuing basis.

In addition, the Commission considered it essential to conduct a similar study of American users. Within the limits of available time and resources, the Commission sought to acquire information on the effects of marihuana on the body, mind and consequent behavior. Because of the one year time frame, the Commission chose to focus its attention on two groups of American "long-term" marihuana users with contrasting patterns of marihuana consumption who could be studied intensively under somewhat artificial conditions of free access to the drug over a short-term.

This study, "Behavioral and Biological Concomitants of Chronic Marihuana Smoking by Heavy and Casual Users," was performed by the Department of Psychiatry, Boston City Hospital, under the direction of Drs. Jack H. Mendelson and Roger E. Meyer. Believing that this study represents a significant new research effort in this field, the Commission determined that publication in its entirety was warranted. At the same time, we emphasize that the following report reflects the views of the authors and does not necessarily express the opinions of the Commission.

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I. Introduction

Although marihuana has been used extensively as a drug in many parts of the world for over 1,000 years (Walton, 1938), objective data dealing with the pharmacology of this substance have, until recently, been scant. During the past four years there has been a striking increase in research activities in the United States as a consequence of the growing prevalence of marihuana use among the young and the need to define the public health implications of this phenomenon. Currently, casual or experimental use of marihuana is extensive within the community of young adults in the United States (King, 1969; Manheimer, et al., 1969). But, a recent comprehensive and critical review of marihuana research revealed that all but one of the experimental studies of marihuana on human behavior have only focused upon the effects of acute doses of the drug (Hollister, 1971). While information about acute dose effects is essential, knowledge of effects of chronic use is probably more relevant to the questions posed by social and health agencies concerned with consequences of

the increasing use of marihuana. The situation appears to be analogous to the chronic use of alcohol and tobacco wherein it is impossible to ascertain medical risk on the basis of acute administration of the substances in naive or infrequent users. Rather, the consequences of habitual and chronic use can only be observed in populations of heavy users over time, and by careful observation of the effects of repeat dose administration on persons who habitually use these substances. The analogy becomes more important with the rising numbers of marihuana smokers who indulge every day and who generally also experiment with a range of other substances. While most studies of acute marihuana administration have reported relatively benign findings (Weil, et al., 1968; Clark and Nakashima, 1968; Melges, et al., 1970; Hollister and Gillespie, 1970; Clark, et al., 1970; Waskow, et al., 1970), some data have indicated that serious effects may occur in chronic users (Dally, 1967). Moreover, consideration of the natural history of other forms of drug abuse (e.g. alcohol) suggests that when a large number of people use a drug, it is only among the heaviest users that one would ex-

pect to find severe psychopathology, adverse medical effects and evidence (if any) of tolerance and physical dependence.

In the one reported experimental study of the effects of repeat dose administration (Williams, et al., 1946), limitations in the design relative to dose control and precision of task measurements seriously compromised both the interpretation and generalizability of the research findings. One recent study of acute laboratory administration of marihuana cigarettes attempted to differentiate the smoking experiences of heavy and casual marihuana smokers. Meyer, et al. (1971) found that casual smokers showed a greater degree of impairment on perceptual and psychomotor tasks than did heavy smokers; while heavy smokers experienced more profound subjective effects within thirty minutes of smoking but were less intoxicated than casual smokers one hour later.* This study of acute marihuana administration suggested that behavioral tolerance to the effects of marihuana may occur in man. Alternatively, there may be a predominance of stimulant effects in the group of heavy users and depressant effects in the group of casual users which could be explained by tolerance to the depressant effects of the drug in habitual users.¹

The present study sought to focus on physiological, mood and behavioral effects of repeat dose marihuana administration under controlled ward conditions. Utilizing an experimental paradigm which had been used previously in self-administration studies with alcoholics (Mello and Mendelson, 1970), the present research design compared the free-choice marihuana consumption patterns of two groups of subjects whose previous smoking histories approximated those of heavy or casual users. Two groups of subjects with quantitatively distinct prior marihuana smoking histories were used in order to evaluate the influence of past use on the acute and short-term cumulative effects of repeat dose marihuana administration.

The specific objectives of the research were to provide data concerning the following questions:

*Casual users were defined as persons with a 2-5 year history of marihuana use with a current smoking pattern of 1-4 smoking sessions per month. Heavy users were defined as persons with a 2-5 year history of marihuana use with a current smoking pattern of at least 25 sessions per month.

¹ Obviously in the absence of measured blood levels of active principal (THC) such speculations cannot be confirmed or refuted. However, support for the possibility of tolerance to marihuana gains credibility from recently reported animal studies using tetrahydrocannabinol (McMillan, et al., 1970).

1. *Does repeat dose marihuana systematically affect motivation to engage in a variety of social and goal-directed behaviors?*

(a) Are there discernible differences in type, frequency and intensity of specific behaviors (e.g. studying, initiating social contacts, personal grooming, etc.) when subjects chronically smoke marihuana? (b) Does work at an operant task for money reinforcement decline with repeated doses of marihuana? (c) Is the period of relaxation and passivity reported to follow marihuana intake associated with increased or decreased work output, i.e., are relaxation and passivity transient and reconstituting or are they persistent?

2. *Are there consistent relationships between free-choice marihuana intake and antecedent and consequent mood states?*

(a) Are there characteristic mood states that precede marihuana intake (tenseness, boredom, etc.)? (b) Are there stable relationships between antecedent and consequent mood states (i.e., does marihuana intensify existing mood states or does it change them)? (c) Are there differences in such antecedent or consequent mood states between casual and heavy users of the drug?

3. *What are the relationships between free-choice marihuana intake and patterns of social interaction?*

(a) Are frequency and timing of marihuana smoking related to social structure within a group? (b) Do patterns and types of social interaction differ during periods when marihuana is and is not available? (c) Are there differences in social interaction patterns between casual and heavy users of the drug?

4. *What are the relationships between free-choice chronic marihuana intake and performance on psychological tasks which assess functions such as time estimation, memory and psychomotor skills?*

(a) Does free-choice marihuana intake lead to an improvement or impairment of performance? (b) Do subjects consistently smoke marihuana before engaging in skilled tasks or do they avoid marihuana at those times? (c) Are there differences between casual and heavy users either in their use of marihuana in relation to task performance or in the effect of marihuana on performance?

5. *Are there characteristic differences in marihuana smoking patterns between casual and heavy users and are there identifiable parameters related to the different patterns?*

(a) Are individual patterns of use (temporal spacing, frequency, mode of use) stable or fluctuat-

ing? (b) Are there differences in these patterns between casual and heavy users beyond frequency of intake alone? (c) Do any initial differences that may exist between casual and heavy users change with self-determined repeat dose administration?

6. *Are physiological and biochemical changes associated with self-determined repeat dose administration?*

(a) Do casual users differ from heavy users with respect to cardiovascular and pulmonary functions? (b) Are there dose and dose-time relationships between marihuana intake and physiological effects? (c) Is there any adaption of physiological and biochemical factors altered by marihuana intake which would reflect acute or chronic tolerance? (d) Are any body functions uniquely sensitive to the acute and/or chronic effects of marihuana?

II. Subjects

Approximately 380 telephone call inquiries were received in response to ads placed on two occasions in Boston's two "underground" newspapers (The Phoenix and Boston After Dark). Out of this larger group, 228 persons came to the Department of Psychiatry at Boston City Hospital to complete a Drug Use Questionnaire. The 58 subjects who most closely met the criteria of "heavy" and "casual" users were requested to have an interview with a psychiatrist. "Heavy" users were defined as persons with a 2-5 year history of marihuana use who smoked daily for at least one year prior to the study. "Casual" users were defined as subjects with a current smoking pattern (of at least one year's duration) of 1-4 smoking sessions per month.

In the selection of subjects preference was given in both groups to those subjects with minimal additional experience with other drugs of abuse, although it was recognized that a history of multiple drug use might be found for many subjects. Twenty-seven heavy users and 31 casual users were selected (on the basis of drug use information) for interviews by the project psychiatrist. Persons with a history of neurological disease (including seizure disorders), hepatic, renal, pulmonary, cardiac, gastrointestinal, genitourinary and nutritional disorders were excluded from the study and persons with a past history of psychotic illness were also not included in the sample.² Ten heavy users

and ten casual users whose availability for the study period was confirmed were selected. The ten casual subjects were studied in an initial 31 day period; the ten heavy users were studied in a second 31 day period.

The characteristics of both groups of subjects are described in Tables IA through V. The conditions of the research design, including a 31 day period of hospitalization without outside contact, discouraged potential volunteers who were married or involved in full-time work or school. In previous studies which did not involve prolonged hospitalization (Meyer, et al., 1971), subjects meeting the criteria of casual users were readily recruited. These subjects appeared psychiatrically well-adjusted and generally were involved in full-time productive activity. We had hoped to have been able to recruit students or workers on summer vacation for the present study, but contractual arrangements were not completed until the end of the summer. Thus, subjects described as casual users in the present study more closely approximate the heavy users utilized in previous work (and in this study) in regard to frequency of marihuana usage, tendency toward multiple drug usage, being unmarried and unemployed. In contrast to earlier studies in which casual and heavy user groups differed along several parameters, the groups in the present study appeared to differ primarily in quantitative patterns of drug use.

Personal data for casual users are described in Table IA. The mean age of subjects in this group was 24 with a mean I.Q. of 122.2, nearly 2.6 years of completed college work and a rather erratic job history, characteristic of a pattern of itinerant, youthful living. The usual employment of all subjects, with the exceptions of subjects 6 and 10, was considerably below expected levels of ability given the I.Q. levels. There was a tendency toward brief periods of employment at unskilled jobs. Personal data for the heavy user group is described in Table IB. The mean age of this group was 22, with a mean I.Q. of 117.4 and 2.3 years of completed college. Here again the work pattern was that of under-achievement.³ When Tables IA and IB are compared the two groups of subjects appear to be more alike than different.

the start of each study several volunteers who were selected as subjects were no longer available to participate because they had either found jobs or had left the Boston area.

³ It is not possible with the information obtained in this study to either attribute or refute an etiological role of marihuana use in the apparent "underachievement" suggested by the work histories in both groups. It was mentioned above that the 31-day hospitalization required for participation tended to preclude selection of potential subjects who were either employed or in school.

² One volunteer with a history of epilepsy, three with a history of serious emotional disorder and one who was borderline retarded were excluded in the selection process.

In the interim between the subject-selection process and

Table IIA describes the family histories of the casual users. All came from intact families with the exception of subject 6 whose mother died when he was 14 years old. Families' socio-economic status were generally middle to upper middle class. Five of the subjects reported some family history of drug or alcohol use.

Table IIB describes the family backgrounds of heavy users. The families' socio-economic status in this group were lower middle class and four of the subjects came from broken homes. Of special interest is a significant family history of drug or alcohol abuse for 8 of the 10 heavy users, with several family members involved in many cases.

Table IIIA describes patterns of substance use for casual marihuana users. The first substance used was generally alcohol with the mean starting age at 16.6 followed by marihuana at 18.5 (Table IVA), amphetamines at 19.7 and hallucinogens at 21.3. Alcohol use was generally infrequent but 6 of the subjects used hallucinogens less than 10 times and 4 subjects used it more than 10 times. Other illicit drug use tended to be sparse and non-habitual.

Table IIIB describes the substance use patterns of the heavy marihuana users. Comparison of data from Table IIIA and Table IIIB shows that alcohol use began at a mean age of 15.3, marihuana at 17.0 (Table IVB), hallucinogens at 18.4 and amphetamines at 19.0. Alcohol use was infrequent and similar to that of the casual users but use of hallucinogens was significantly higher than among the casual marihuana users. Only 1 of the 10 subjects had used hallucinogens less than 10 times; four used it more than 10 times; 2 more than 50 times; and 3 greater than 100 times. One subject also reported a history of heroin addiction but was currently in remission. Six of the heavy users reported a history of intermittent cocaine use but only 3 of the casual users had a similar history. The multiple drug use patterns in the heavy users was consistent with data obtained in studies by other investigators.

The marihuana use histories of the casual users is described in Table IVA; that of the heavy users in Table IVB. Of interest is the fact that only 1 heavy user reported that his response to marihuana was extremely pleasant on the first occasion. Seven heavy users reported that their last smoking session was extremely pleasant. This is in contrast to 4 casual users who reported that marihuana was extremely pleasant on the first occasion with only 3 finding it extremely pleasant on the most recent one. These data are remarkably similar to data which is available in the alcohol literature. It has been found that the initial drinking experience by the alcoholic is often not particularly pleasant with

subsequent ingestion producing a very pleasant response to alcohol. Also of interest is the finding that 9 of the 10 heavy users report feeling relaxed when smoking marihuana while only 3 of the casual users report feeling relaxed and one reported feeling more anxious with marihuana.⁴

The total years of marihuana use was roughly equal in the two groups, but the heavy users tended to smoke a mean of 33 sessions per month (range 10-75) while the casual users smoked a mean of 7.7 sessions per month (range 3-15). The two groups thus differed in their marihuana smoking patterns in terms of frequency, initial and current subjective responses to the drug.

Table V compares the comparative socio-economic status of casual and heavy users with that of their parents. Both casual users and heavy users had employment status consistent with the lower middle class achievement as did the parents of the heavy user group.

In summary, in comparison to casual users the past histories of heavy users included more frequent use of marihuana (as expected by the selection process), a greater degree of involvement with other illicit substances (particularly hallucinogenic drugs), and a greater likelihood of emerging from a broken family and/or a family with a history of substance abuse. On admission to the research unit, the heavy users appeared to be more depressed in mood than the casual users, according to the clinical impression of the admitting psychiatrist. During this clinical interview two of the heavy users showed some deficit in abstractive ability but no overt psychotic symptomatology (although they frequently had "blank stares" suggestive of lapses in attention). Two of the three casual users who smoked most heavily during the study were initially felt to be the most neurotic subjects in the group; while the third subject was felt to be very well adjusted (and turned out to be one of the most well-liked subjects in the group). Preliminary assessments on the MMPI and Edwards Personal Preference Scale demonstrated no striking pattern with either group of subjects. Detailed histories of individual subjects are not included in this report in order to avoid possible identification of the individuals.

III. Methods

A. Setting: The project was in the Department of Psychiatry at Boston City Hospital. The re-

⁴Of special interest is the fact that two of the three casual users who retrospectively reported relaxation while smoking marihuana were the heaviest users of marihuana (among the casual users) in this study (see below). Their marihuana use patterns during the study were similar to that of the heavy user group.

search ward consisted of 10 individual patient bedrooms, a nursing station, kitchen, lavatory, shower room, dining room, day-room, recreation room, examination room, and offices for staff and apparatus. The ward was comfortably furnished and contained a television set, ping-pong table, card table, and an array of recreational materials. A large open lawn area was available to subjects for outdoor recreational activities including volley ball, touch football and soccer. Subjects were not allowed visitors or access to the telephone, but they were allowed to write and receive letters.

B. Research Paradigm: Two studies were conducted; each utilizing 10 subjects under identical experimental procedures over separate 31-day periods. The first group of subjects were casual marihuana users; the second group were heavy users. Both studies were divided into three separate periods: a pre-drug period of 5 days during which subjects did not have access to marihuana; a subsequent 21-day drug period when subjects could purchase and smoke marihuana cigarettes on a free-choice basis; and a 5-day post-drug period when subjects did not have access to marihuana. On the last day of the 21-day period of drug availability, subjects were required to smoke one cigarette before a series of assessments of brain functions (as described below) were made.

The assessments which were carried out during the study included the following (see Schedule I): (1) work contingent operant acquisition and free choice marihuana consumption patterns; (2) measurement of mood states; (3) individual and group behavior observations; (4) clinical psychological evaluations; (5) psychomotor assessments and (6) physiological measurements. A detailed description of the procedures and techniques employed for each assessment is included in the presentation of results in following sections of this report.

All assessments were scheduled insofar as possible not to interfere with the operant task or free choice marihuana smoking. Certain specific evaluations were made in close temporal contiguity with marihuana use. This technique permitted differentiation of acute and repeat dose effects of the drug.

Subjects had an operant manipulandum available at all times (see description below) with which they could earn reinforcement points. The points, in turn, could be used to purchase tobacco cigarettes during all periods of the study, or marihuana cigarettes during the 21-day period. Points could also be accumulated for conversion into money at the end of the study. In addition to being paid for cumulative reinforcement points,

subjects also received pay for accurate performance on certain tasks and for cooperating during other assessments. Individual subject assessments required about three and one-half hours per day. During the remaining hours of each day subjects were free to do as they wished within the research ward and adjacent outside lawn area.

Subjects were fully informed of the nature and conditions of the study at the outset, and they had the option to terminate their participation at any time, with the understanding that they could not be paid for their participation. This condition was decided upon in order to motivate subjects to remain throughout the study period.

Marihuana cigarettes which could be purchased and smoked during the 21-day drug period were obtained from the National Institute of Mental Health in a lot standard dosage form. The cigarettes were machine rolled in order to insure maximal standardization and equivalent dosage and "draw" characteristics. Each cigarette contained approximately 1 gram of marihuana with a THC content of 1.8–2.3% as assayed by the National Institute of Mental Health. This contrasts with the quality of marihuana normally available on the street which is generally acknowledged to contain less than 1.0% THC. Subjects were permitted to purchase and smoke marihuana cigarettes whenever they chose during the drug period with two conditions: (1) all smoking of marihuana was to be done under the observation of a member of the staff; (2) the unused portion of the cigarette was to be returned to the staff upon the completion of smoking. These conditions were effected to insure good security and to permit accurate recording of observations relating to smoking behavior.⁵

⁵ During the latter part of the second study some subjects devised a technique that enabled them to occasionally "snip" a small portion of marihuana from the cigarettes they were smoking. The intent was to save this pilfered marihuana for smoking during the five-day post-smoking period. The technique was discovered and counteracted during the smoking period, and a search conducted on the unit during the second day of the post-smoking period uncovered a total of approximately two grams of marihuana in subjects' possession.

The search also uncovered a small portion of hashish that one subject had brought into the unit at the start of the study. During an interview conducted at the end of the study it was determined that most subjects had smoked some marihuana during the post-smoking period, but the amounts smoked averaged less than one gram per subject. The subject with the hashish stated he had smoked it four times during the smoking period and 2 or 3 times during the post-smoking period. The amounts smoked surreptitiously are considered to be too minor to affect any of the results of this research.

C. Work Contingent-Operant Acquisition and Free-Choice Smoking Patterns:

Operant Programs: An operant task was included in this study to permit an objective quantitative and reliable measurement of the reinforcement value of money and marihuana cigarettes. Data relating to operant performance in this research is relevant to an understanding of the effect of marihuana on motivation.

The operant manipulandum consisted of a 4-digit hand counter, and the operant task consisted simply in accumulating points on the counter. This relatively uncomplicated and easy task was chosen because results obtained in previous alcohol-related research indicated that impairments in performance did not occur even at high drug levels. It was decided to employ an operant task which is relatively unaffected by a centrally acting drug so that changes observed in performance could be ascribed to changes in motivation to work, rather than marihuana induced motor impairment.

A fixed ratio reinforcement schedule was utilized and one response (one button press) produced one reinforcement point on the counter. The monetary conversion value for reinforcement points was fixed at one cent for 60 points. This exchange rate was based, in part, on data obtained in previous alcohol-related research which indicated that an average work output of 30 minutes was required to produce 6,000 reinforcement points with apparatus similar to that employed in the present research. Subjects had access to their hand counters throughout all phases of this study. They could perform at the operant task at any time during the day and night, however, they were allowed to earn no more than 60,000 points (an equivalent of \$10.00) within a 24-hour period. Accumulated reinforcement points were recorded every two hours throughout the study to provide a temporal record of work output.

In addition to accumulating reinforcement points for monetary exchange at the end of the study, subjects had the opportunity to use points to purchase either tobacco cigarettes during all phases of the study or marihuana cigarettes during the 21-day drug period. The cost of the cigarettes was set to correspond to current prices in the Boston area, i.e. 3,000 points (\$0.50) for a package of tobacco cigarettes and 6,000 points (\$1.00) for one marihuana cigarette.

IV. Results

A. Operant Data: During the early days of both studies, subjects discovered that the four-digit wheels would rotate if the counter lever was

given a hard, sharp jolt. The rotation of the digit-wheels was erratic so that, after a jolt, the reading on the counter could be more or less than it was before the jolt. Nevertheless, practically all subjects chose to use this method in accumulating points because, in balance, points could be accumulated much faster even though there may not have been any savings in total work-energy output. That is, rather than a simple, quickly habituated, painless thumb twitch requiring very little thought or attention, the method they chose to use required attention, involvement of large muscle groups, the possibility of a small amount of pain while giving the lever a sharp jolt, and some decision making as to whether they should give the counter another jolt (and possibly lose more points than they can gain). The latter decision was particularly important when the counter reading was near maximum (9999) because subjects had to show this reading to a member of the research staff before they were credited with the points. Thus, if the counter reading went beyond this point before being shown to the staff it would revert back to 0000 and subjects would not be credited with the points. Another decision was added to the task because counter readings were recorded every two hours. Since subjects believed that the staff was not aware of the method they were using to accumulate points, subjects were careful not to accumulate more points in a two-hour period than they could have accumulated by simply button-pressing.

No attempt was made to interfere with subjects' preferred method of accumulating points once it had been discovered. There were three reasons for this decision: (1) their preferred method required at least as much (and possibly more) total work-energy output as the assigned method; (2) a change in method in mid-study would interfere with making comparisons of work output during different phases of the study (and interfere with comparisons between the first and second study); (3) there would be no basic differences in interpretations of patterns of work output since subjects felt the two-hour readings compelled them to distribute their work throughout the day.

Both the casual users and heavy users displayed similar work contingent operant acquisition behavior. The most significant feature of this behavior was that, almost without exception, every subject earned the maximum number of reinforcement points every day during both studies (see Figures 1A-20A, Table VI, Table XXXI). This finding is in marked contrast to results obtained in alcohol related research in which subjects demonstrated periodic, complete cessation of work output when they were consuming alcohol. Subjects in the present study not only earned the max-

imum reinforcement points throughout the drug period, there also appeared to be no consistent alteration in the pattern of work contingent operant acquisition which could be related to marihuana use. Subjects often performed very high work-output while they were smoking marihuana and when they were experiencing the maximum effects of the drug (Figures 1A-20A). Thus, the results disclosed no indication of a relationship between decrease in motivation to work at an operant task and acute or repeated dose effects of marihuana. In this regard it must be remembered that the operant task selected for this research was relatively simple, and it required a minimum amount of physical or mental exertion even with their preferred method of accumulating points. Different results in operant work performance might be obtained with more complex tasks. Nevertheless, these data stand in sharp contrast to the effects of acute and repeat dose consumption of alcohol in a similar operant assessment.

While daily total work output remained constant throughout both studies, there was a slight shift in the temporal distribution of work toward the later hours of the day (Table VI). During the 5-day pre-drug period approximately 1 to 2% of the work occurred after 10 P.M. During successive 5-day quarters of the smoking period the percentage of work occurring after 10 P.M. increased to 11%. This trend toward later work output showed a tendency toward reversal during the 5-day post-drug period when 8% of the work occurred after 10 P.M. The significance of the apparent shift of work toward later hours during the smoking period is unclear. It is possible that although there was no overt decrement in the subjects' motivation to obtain reinforcement points (as reflected in total work output), there was a decrease in work output per hour over a given 24 hour interval. If the smoking period had been extended beyond the 21 days in this study, it is conceivable that some decrease in total work output may have occurred. Obviously, further work is needed to clarify this possibility.

B. Marihuana Consumption: During the 21-day drug period of each study subjects could purchase (with reinforcement points) and smoke marihuana cigarettes at any time during the day and night. They were required to smoke in the presence of a staff member who made the following observations and ratings: time that smoking began and ended; the amount of each cigarette consumed; participants in each smoking group; and the amount and type of verbal and nonverbal communication between subjects during smoking.

Unsmoked portions of the cigarettes were re-

turned to the staff member. These were later weighed in order to determine the exact amount of marihuana which had been smoked on each occasion. Subjects were reimbursed for marihuana not consumed (i.e., subjects paid only for marihuana actually smoked). This procedure was employed in order not to force smoking of a complete marihuana cigarette if the subject did not wish to do so.

Results based on the observations and ratings made during smoking are presented elsewhere in this report. The findings presented in this section are limited to quantitative patterns of marihuana consumption.

The amount and distribution of subjects' marihuana consumption are presented in Figures 1A-20A and Table VII. Individual consumption by the casual users (Figures 1A-10A) ranged from an average of less than one a day to 6.2 a day during the first 20 days of the 21-day smoking period.

Marihuana consumption during the 21st day of smoking period was not included in averaged data, because smoking patterns during the last smoking day were clearly atypical (Table VII).⁶ Mean group consumption data during successive 5-day quarters of the smoking period revealed a definite trend toward increased use of marihuana. There was a 46% increase in use of marihuana during the fourth quarter compared to the first quarter. An examination of consumption patterns for individual subjects showed that the trend toward increased use occurred in those subjects who initially were the heaviest users of the drug in the casual user group. This increase in marihuana use was related to both the number of new initiations of smoking (cigarettes purchased) and the total amount of marihuana actually smoked (cigarettes purchased minus marihuana returned). Subjects in this group who initially were the least frequent users of the drug did not show an increase in use over the course of the study.⁷

⁶ The number of marihuana cigarettes smoked on the last smoking day ranged from 1 to 13 among the casual users and from 9 to a phenomenal 20 among the heavy users. It is noteworthy that although the amount of marihuana consumed by many subjects on the last smoking day far exceeds any previously reported amount of observed marihuana smoking in a similar time span there were no discernible differences in behavior from that occurring throughout the total smoking period. This observation is elaborated upon elsewhere in this report.

⁷ Subjects 2C, 5C, 9C and 10C smoked an average of less than two marihuana cigarettes a day each during the first quarter of the smoking period, and their daily smoking increased by a negligible 4% by the fourth quarter of the smoking period. In contrast, subjects 1C, 3C, 7C and 8C who smoked an average of 4.4 marihuana cigarettes each during the first quarter increased their smok-

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A similar trend toward increased marihuana consumption was observed in the heavy user group (Figures 11A-20A, Table VII). There was a 37% increase in smoking in the fourth quarter of the drug period as compared to the first quarter. Consumption in the heavy user group ranged from an average of 3.6 cigarettes a day to 8.7 a day. Analysis of group data revealed that the heavy users consumed approximately twice as much marihuana as the casual users. Subjects in both groups tended to smoke practically all of each cigarette (Table VII), but the heavy users were more likely to smoke more than one cigarette in one smoking session (Figures 11A-20A).

C. Response to Smoking: Global measures of "highness" (on a 10-point scale described elsewhere) were recorded for the heavy users during the entire 21-day smoking period but for the casual users only on the last day of the smoking. Thus, comparisons between the two groups are not possible. However, for the heavy users, with the exception of 2 subjects (H7 and H10) there was no correlation between "highness" and smoking day (Figures 17A and 20A). The data suggest that no tolerance to subjective effects occurred as the smoking period progressed for most experienced users. The increased frequency of use over time is, however, consistent with the observations of Meyer, et al. (1971) that the duration of the high in heavy users may be of shorter duration than in less experienced subjects.⁸

The lack of tolerance to subjective effects through time in the heavy user group is also confirmed by scores on the Subjective Drug Effects Questionnaire of Katz and Waskow (1968) which was administered on 4 different occasions to the heavy user group and on an irregular schedule to casual users. Cumulative scores for somatic, perceptual, awareness, feeling, increased and decreased control, friendliness, unfriendliness and altered thinking do not change over time in either

group. Moreover, with the exception of "ambivalence," there were no differences in the subjective reports of heavy and casual users. Of considerable heuristic interest was a significant difference in "ambivalence" scores between the two groups. The heavy users scored significantly higher than casual users on this measure following acute administration.

$$\begin{aligned}\bar{x} \text{ Heavy users} &= 23.3 \text{ I } 2.6 \\ \bar{x} \text{ Casual users} &= 13.4 \text{ I } 10.2 \text{ } t=2.5 \\ & \quad p .05\end{aligned}$$

Katz and Waskow (1968) believe that this item is the best measure of "psychedelic effects" of hallucinogenic drugs. Previous work reported by Meyer, et al. (1971) found significant ambivalence scores only in the heavy user group. Of special interest in the current study was the fact that the casual users showed no consistent increase in this measure over the 21-day smoking period.

D. Physiological and Medical Evaluations:

1. Methods: All subjects received a thorough medical evaluation including medical history, physical examination, chest X-ray, and electrocardiogram on the first day of the pre-drug period of the study. On the second day urinalysis (first morning urine), blood count and a blood chemistry profile were performed. This profile included: calcium, phosphorus, glucose, blood urea nitrogen, uric acid, cholesterol, total protein, albumin, total bilirubin, alkaline phosphatase, lactic dehydrogenase and serum glutamic oxaloacetic transaminase. Each subject had blood drawn on 5 separate occasions during the course of the study and on each occasion a sample of plasma (drawn at 8 A.M.) was frozen for subsequent plasma cortisol determination. Physical examinations were done (each time by the same physician) at regular intervals during the smoking period and post-smoking baseline period. All the above evaluations were done at the same time intervals in both the casual and heavy smokers as shown diagrammatically below. Copies of the history and physical examination forms used in the study are included in the appendix.

In addition to the initial Baseline Electrocardiogram each subject had a complete electrocardiogram on arising and at bedtime every other day during the pre- and post-smoking periods as well as during the period of marihuana smoking. Each subject also had a complete electrocardiogram immediately after smoking one marihuana cigarette on the last smoking day.

Vital sign measurements including blood pressure and radial pulse (each done first in the sitting

Footnote continued from previous page.
ing by 59% by the fourth quarter. On the pre-study drug use questionnaire, two of these latter subjects were among the three casual users who reported that marihuana had a relaxing effect—an effect reported by nine of the ten heavy users. Also, two of these subjects (including one who had reported a relaxing effect of marihuana) were felt to be the most neurotic of the casual user group on the basis of an initial clinical interview. On the other hand, another of these subjects was one of the most popular subjects both with his peers and the research staff.

⁸ Alternatively, the quality of high may be different for the two groups and may change with heavy use. Meyer, et al. (1971) have suggested that tolerance to marihuana (THC) may occur predominantly to the depressant effects so that heavy use may be associated with a predominance of stimulatory (or hallucinatory-like) effects.

position followed by standing position) and oral temperature were carried out three times daily, on arising, at 5 P.M. and at bedtime. Forced Expiratory Lung Volume (F. E. V.) and 1 second (timed) forced expiratory volume (F. E. V.₁) were assessed with a spirometer twice daily, on arising and at bedtime. All subjects were weighed each morning on arising. A copy of the *Medical Data Summary* form used for recording this data is included in the appendix.

The above measurements were carried out for all subjects, casual and heavy marihuana smokers. In the second groups, "heavy marihuana smokers," the radial pulse was counted before and after each marihuana cigarette on the first three days of marihuana smoking and every second smoking thereafter. Each time this assessment was carried out, the subject was asked to rate his subjective "high" on a numerical scale before and after each marihuana cigarette.

2. Data Analysis and Display: Histograms (Figures 1B-2B) are presented for each individual subject for weight, temperature, Forced Expiratory Volume (F. E. V.), 1 second forced expiratory volume (F. E. V.₁), pulse (sitting and standing), blood pressure (sitting and standing) and physical examination findings are graded as follows: 0 (absent), 1 (slight), 2 (moderate), 3 (marked), 4 (severe-maximal). Nystagmus refers to lateral gaze nystagmus. Tremor refers to fine tremor of outstretched fingers. Reflexes refer to a composite rating of brachial, triceps, radial, patellar, and achilles reflexes with a rating of "2" being considered normal or usual.

Standing pulses measured within 1 hour after smoking marihuana are circled in the histogram displays (Figures 1B-20B) for ease of identification. Likewise, physical examination data within 1 hour of smoking marihuana are identified by an asterisk (*) adjacent to the first notation (e.g.: conjunctival injection) in the respective vertical column. Each marihuana cigarette consumed is shown as a narrow vertical bar at the appropriate position on the graph.

Individual subject means and standard deviations for each measured parameter discussed above were computed for 6 intervals for 5 days each (I=pre-smoking baseline; II, III, IV, V=each 5 day marihuana smoking period; VI=post-smoking baseline). Means and standard deviations for each physiological parameter measured within 1 hour after smoking marihuana, referred to as "smoking related measurements," were also computed for each subject.

3. Results:

A. Laboratory Studies

(1) *Urine:* The first voided morning urine on days 2, 10, 17, 24 and 31 were examined in both the casual and heavy marihuana smoking groups. No abnormality was noted in urinary concentrating ability (specific gravity) in any of the subjects. Likewise, no proteinuria, glycosuria, ketonuria, hematuria or significant alteration in urine acidity were found.

(2) *Blood:* Formed elements: Peripheral venous blood was examined on days 2, 10, 17, 24, and 31 for both groups of subjects. No abnormality or significant change during the course of the study was noted for hemoglobin, hematocrit, or white blood cell count in any of the subjects. The peripheral blood smear was examined microscopically for all subjects on study days 2, 17, and 31 and no abnormality was noted in blood cell morphology. In both the casual and heavy marihuana groups, all subjects generally had slightly elevated monocyte counts (in the range of 7 to 11% of total polymorphonuclear leucocytes). Five subjects in the casual smoking group and three in the heavy smoking group had occasional small increases in eosinophile counts (4 to 6% of total polymorphonuclear leucocyte count). These findings do not appear to be of clinical significance.

(3) *Blood Chemistry:* Comprehensive blood chemistry profiles carried out on study days 2, 17 and 31 were all within normal limits except for the following minor abnormalities: Serum glutamic oxaloacetic transaminase in subject 10C was 86 units on day 2 but normal on 2 subsequent determinations. Subject 7H had normal SGOT on days 2 and 17 with an elevation to 65 units on day 31 (upper limit of normal=50 units). Subject 2C had elevated alkaline phosphatase determinations of 100, 105, and 125 units respectively on the three occasions that these tests were done (upper limit of normal=85 units). Subject 8H had a minimal elevation of lactic dehydrogenase to 210 units on day 21 (upper limit of normal=200 units). Subject 8C had an elevated inorganic phosphorus of 7.1 mg% on study day 31 (upper limit of normal=4.5 mg%). The random patterns of these minor biochemical abnormalities suggest no clinical significance.

(4) *Chest X-Rays:* No abnormalities were reported by the radiologist who examined the pre-study chest X-rays of all subjects.

B. Body Weight

No subject showed evidence of poor nutrition at the initiation of the study. All 20 subjects, except for 7C gained weight during the course of the study. The maximum weight was almost always observed at the end of the marihuana smoking period. During the 5 day post-smoking period all

subjects except 2H lost weight, however, only three subjects of the total group of 20 weighed less at the end than at the outset of the study. For both casual and heavy marihuana users, the period of marihuana smoking was associated with weight gain although there was no apparent quantitative correlations between amount of marihuana smoked and amount of weight gain by a given individual. Mean maximum weight gain for the casual users was 7.8 pounds and for the heavy users, 10.4 pounds. Comparing the mean weights on the first and last days of the study, there was a mean net increase of 1.3 pounds for the casual users and 4.8 for the heavy users. These data are shown in Tables VIII and IX.

C. Temperature

Throughout the course of the study all subjects had oral temperatures generally at the lower range of normal. There was no apparent correlation between marihuana smoking and variations in body temperature. The only significant temperature elevation observed was at bedtime on day 27 in subject 3C. The subject felt warm but denied specific symptoms. The fever was confirmed by repeat oral temperature measurement. Spontaneous remission without sequelae occurred within 24 hours.

D. Pulmonary Function (F.E.V. and F.E.V.₁)

Forced Expiratory Volume (vital capacity—V.C.) and one second Forced Expiratory Volume (F.E.V.₁) measurements were compared with computed normal values for all subjects in the pre-marihuana smoking phase. Reduced Vital Capacity occurs in chronic obstructive lung disease such as emphysema and is often associated with chronic heavy cigarette smoking. F.E.V.₁ is reduced in bronchospasm and certain acute pulmonary disorders. The V.C. (F.E.V.) was chosen in an attempt to measure any impaired lung function which may be associated with a chronic history of marihuana smoking. One subject (4C) had a history of bronchial asthma in childhood. Subjects 3C, 8C, 9C and 10C in the "casual" group and 3H, 5H, 6H, 7H, 8H and 9H in the "heavy" group were current cigarette smokers. Based on a comparison between our measured values obtained in the pre-marihuana smoking period and *computed normal values*, both F.E.V. (vital capacity) and F.E.V.₁ (1 second) were reduced in subjects 1C, 4C, 8C, 10C, 4H, 8H, and 9H. F.E.V. (vital capacity) alone was reduced in subjects 5C, 6C, 1H, 2H, and 10H.

Comparing the 5 day means (II-V) during the marihuana smoking period with the 5 day means (I and VI) in the pre- and post-smoking phase there was no apparent effect of the 21-day marihuana smoking on either Vital Capacity or F.E.V.₁.

E. Blood Pressure and Pulse

Blood pressure (B.P.) was measured by auscultation on the brachial artery using a standard sphygmomanometer applied to the right arm and pulse (P.R.) was always counted for 15 seconds (and multiplied by 4) using the right radial artery. B.P. and P.R. were always measured first with the subject in a sitting position and then repeated after the subject had been standing for 15 seconds. Since standing is associated with a transient fall in pressure in the baroreceptors and consequent compensatory reflexes, measurement of B.P. and P.R. in this fashion should be useful for the following reasons:

(1) Marihuana is known to dilate peripheral blood vessels; if its vasodilator effect is very profound, it may exaggerate the transient pressure drop at the baroreceptors and thus exaggerate the normal increase in pulse rate associated with standing. Thus, blood pressure may remain stable or rise slightly in a compensatory manner.

(2) The compensatory reflexes which lead both to increased pulse rate and blood pressure stabilization depend on the intact autonomic (sympathetic) nervous system function, and many ubiquitous drugs, including nicotine and some of the tranquilizing drugs affect the autonomic nervous system. Therefore, if marihuana smoking attenuated these cardiovascular reflexes, this could be an indicator of its effect on autonomic (sympathetic) nervous system function. This effect would be manifested by a fall in blood pressure without an associated pulse rate increase (tachycardia) on changing from a sitting to a standing position.

In reviewing the 5 day means (Tables X-XI) from our 20 subjects it is apparent that no major trends in either sitting or standing blood pressure responses were found comparing the pre- and post-smoking periods to the smoking periods.

Analysis of 5 day means for pulse rate data indicates a tendency for the standing pulses to be highest during the smoking periods (II-V). This is more apparent for the 5 P.M. and bedtime data than for the morning data because the latter are less likely to be measured after marihuana smoking. There is not any particular trend for the sitting pulse rate means to be higher during the smoking phase.

Analyses of individual sitting and standing pulse and blood pressure measures taken in the first hour following the smoking of a single marihuana cigarette were carried out on data obtained from both groups.* Variable systolic and diastolic

* For the purpose of this analysis of the acute cardiovascular response to marihuana, we did not include measurements of acute effects where the subject had also

blood pressure elevations and declines were observed following single marihuana cigarette smoking, but there was no consistent pattern to this response.

Pulse rate data analyzed in the same manner revealed a somewhat variable tachycardia. It is significant that the highest post-smoking standing pulse rate increase occurred on the first smoking day with the smoking of the first cigarette. The results in the casual user group over the 21 day smoking period suggested the possibility that tolerance developed to the tachycardic effects of marihuana. This observation led to the modification of procedures in the heavy user group. The initial and immediate post smoking radial pulse rates were recorded for every marihuana cigarette consumed on the first three smoking days and for every "joint" smoked on alternate days thereafter, by the heavy users. At the same time that pre- and post-smoking pulses were recorded, the subject was asked to rate his degree of "high" on a 10 point numerical scale.

Pulse rate data analyzed in the same manner as described above, demonstrated that the greatest pulse increase occurred with the first cigarette on the first day of smoking and the pulse rate increments were highest early in the 21 day smoking period. The variability of the pulse rate response was greatest later in the study when a bradycardic response to smoking was also observed (especially where the pre-smoking pulse rate appeared to be slightly elevated).

In general these findings suggest that tolerance to the pulse rate response to marihuana does exist. This specific question deserves further elucidation using known doses of tetrahydrocannabinol over time. A discussion of the question of tolerance to cardiovascular and psychomotor effects and duration of subjective "high" is included in the discussion section of this report.

F. Electrocardiograms

All 20 subjects had normal initial pre-smoking electrocardiograms except for subject 1C who had non-specific ST-T wave abnormalities in initial as well as all subsequent electrocardiograms and subject 3C who had an indeterminate frontal plane axis with a persistent S wave through lead V6 in all electrocardiograms. Neither of these electrocardiographic abnormalities were considered to represent clinically significant heart disease.

During the period of marihuana smoking there was no change in mean QRS or T vectors in either frontal or horizontal planes for any subject. No

smoked additional marihuana in the 2 hours previous to any smoking session. The data that were analyzed, therefore, are an accurate reflection of acute marihuana effects.

significant abnormality in cardiac rhythm was present in any subject at any time. Two subjects had minor rhythm disturbances. Subject 9C had 2 premature ventricular contractions in the morning EKG on the first smoking day. Subject 4C had 2 premature atrial contractions (P.A.C.) in the evening EKG on the 12th smoking day and 1 P.A.C. in the morning EKG on the 14th smoking day. Neither of these arrhythmias was considered to be of clinical significance. Variable sinus arrhythmias were seen in many of the electrocardiograms during both the pre- and marihuana-smoking periods. Electrocardiograms taken within a short time after marihuana smoking generally showed sinus tachycardia. No other electrocardiograph abnormalities were observed.

G. Cardiac-Exercise Tests

All subjects underwent a standardized exercise test (a modification of the Harvard Step Test) on 5 separate occasions. The test was carried out during the pre- and post-smoking control phases (study days 4 and 30 respectively) and 3 times during the marihuana smoking period, on study days 11, 18 and 25, for both subject groups. This test is based on the ability of the pulse rate to slow over 3 minutes following tachycardia induced by intense physical exercise. For the purpose of ease of tabulation the response is graded as follows: 1=excellent; 2=very good; 3=good; 4=fair; 5=poor. These data are shown in Tables XIIa and XIIb for the casual and heavy smokers respectively.

Subjects 1C and 3C were unable to perform the exercise test adequately for their performance to be rated on the standard scale. Subject 3H performed the test incorrectly in the first control period, and, therefore, no rating could be given for his initial performance. The subjects' exercise performance was generally poor. In the casual group 5 subjects' initial control performance was either fair or poor and 3 additional subjects performed too poorly to be rated. In the heavy smoking group 6 subjects' initial performance was fair or poor and one subject (3H) who performed incorrectly initially had a "fair" rating in the post-smoking control period. Ratings done within one hour after marihuana smoking are noted in the respective column of Tables XIIa and XIIb with an asterisk (*). Subjects who smoked tobacco cigarettes are noted by (T) next to their subject number in the tables. There was no apparent correlation between marihuana smoking prior to testing and performance on the test. In general, subjects' performances indicated they were "out of condition."

H. Physical Examination Findings

As noted previously, complete physical examinations were completed immediately upon admis-

sion to the study and on study days 8, 12, 17, 24, 27, 28, 29 and 31. These examinations were done initially to exclude subjects who presented significant medical abnormalities and to detect any changes either during marihuana smoking or marihuana withdrawal. No major abnormalities were noted on any of the physical examinations. Subject 8H had an involuntary tremor of his hand on the initial examination and all subsequent examinations. Four specific physical indices which were closely followed included:

- (1) conjunctival injection which is known to occur with marihuana smoking;
- (2) nystagmus (on the lateral gaze) which is produced by virtually all drugs acting on the central nervous system;
- (3) tremor (fingers) which commonly occurs during alcohol intoxication and withdrawal;
- (4) reflexes (deep tendon reflexes) the magnitude of which may change under the influence of various centrally acting drugs.

Each of these physical findings was graded (from 0 to 4) and recorded on the subjects' individual physiological histograms (Figs. 1a-20a) with reference to the study day that the examination was done. Five of the casual subjects (2C, 4C, 5C, 8C, and 9C) and five of the heavy subjects (1H, 5H, 8H, 9H and 10H) had used marihuana within 24 hours of the initial physical examination. None of the casual group and two of the heavy group (5H and 8H) had conjunctival injection during the initial physical examination. In 4 of the casual and in 7 of the heavy group the conjunctival injection persisted through the last examination carried out on the fifth day after cessation of marihuana smoking.

Only one subject (10C) of the casual users had lateral gaze nystagmus on the first physical examination, while 7 subjects in the heavy user group (3H, 4H, 5H, 6H, 8H, 9H and 10H) had nystagmus on the initial examination. Only one subject (2C) who smoked very little marihuana failed to develop nystagmus during the smoking period. Five subjects in the casual group (5C, 6C, 7C, 9C and 10C) had nystagmus which persisted 5 days after the cessation of marihuana smoking. Six subjects in the heavy user group (3H, 5H, 6H, 8H, 9H and 10H) had nystagmus which persisted for 5 days after smoking marihuana.

Subjects 2C and 10C in the casual user group and subjects 6H and 8H in the heavy user group showed mild tremors on the initial physical examination. In the casual users all subjects had fine tremors of the fingers during the marihuana smoking period except for 1C and 10C both of whom

had tremors during the post-smoking period.¹⁰ Subject 2C (who had finger tremors in the initial examination) and subjects 6C and 8C had finger tremors on the 5th post-smoking control day. In the heavy group, subject 10H did not have finger tremors on any examination. Subject 2H did not have tremors during the marihuana smoking but developed fine tremors of the fingers during the post-smoking control period. All 8 of the other heavy users had tremors during both smoking and withdrawal periods. Only subject 7H had finger tremors persisting in the 5th post-smoking control day. It is our impression that the nystagmus and fine tremors probably reflect an acute drug effect and not a persistent neurological abnormality resulting from repeated marihuana use.

The deep tendon reflexes were variable in magnitude throughout the smoking and non-smoking periods and did not appear to be related to any drug induced changes.

On subject (6C) had an acute anxiety reaction on the first smoking day subsequent to smoking his first cigarette. The conditions leading up to this were very important in its evolution.

On the morning of the first smoking day, all subjects (except 10C) awakened early in order to commence smoking at 8 A.M. The other nine subjects were smoking when 10C entered the room in a suit and announced that he was really not part of the study but was a research assistant in disguise.¹¹ Subject 6C became extremely anxious and suspicious; but was readily calmed down by the research assistant, and he continued in the study.

It was the impression of the research staff that this episode was a result of the conditions imposed by the behavior of 10C in the context of the first smoking day.

I. Summary of Physiological and Medical Evaluations

Comprehensive laboratory, physiological and clinical evaluations were carried out with 10 casual and 10 heavy marihuana smokers for 5 days prior to marihuana smoking, during a 21 day marihuana smoking period and for 5 days after smoking marihuana. The findings of these studies were:

a. No significant abnormalities of urine specific gravity or acidity were found. There was not proteinuria, glycosuria, ketonuria or hematuria. There was no abnormality in blood cell morphology, white blood count or hemoglobin. All subjects had slightly increased monocyte counts and 8 of the 20

¹⁰ All casual users had fine tremors one or more times during the post-marihuana smoking period.

¹¹ 10C tended to show his hostility by this type of behavior.

subjects had very slight eosinophilia. There were no significant abnormalities in blood chemistry determinations for calcium, phosphorous, glucose, blood urea nitrogen, uric acid, cholesterol, total protein, albumin, total bilirubin, alkaline phosphatase, lactic dehydrogenase, serum protein or serum glutamic oxalocetic transaminase.

b. Nineteen of the twenty subjects gained weight during the study. The maximum weight gain occurred during the marihuana smoking period. The subjects lost weight during the post-smoking baseline period. The mean weight gain during the smoking period for casual users was 7.8 pounds and 10.4 pounds for the heavy users. The mean weight gain during the entire study was 1.3 pounds for the casual users and 4.8 pounds for the heavy users.

c. Subjects had body temperatures at the low end of the normal range throughout the study with no apparent temperature change related to marihuana smoking.

d. Pulmonary function was subnormal in several subjects at the outset of the study. Both vital capacity and one second forced expiratory volume were below normal in subjects 1C, 4C, 8C, 10C, 4H, 8H, and 9H. Vital capacity alone (normal F.E.V.) was reduced in subjects 5C, 6C, 1H, 2H, and 10H. Thus, 12 of the 20 subjects had some abnormality of pulmonary function at the outset of the study; only 3 of these 12 subjects were current tobacco cigarette smokers, and one had a history of asthma in childhood. It is not known if these abnormalities are related to prior marihuana smoking. No significant change in pulmonary function was observed during the 21-day period of marihuana smoking. The data suggest the need for population surveys of chronic marihuana users with careful delineation of tobacco cigarette smoking (based upon "pack years") and exposure to air pollutants over time.

e. Variable blood pressure changes, both increases and decreases, were observed during the period of marihuana smoking; these changes were not considered clinically significant. Pulse rate changes in relation to marihuana smoking were also variable; though an increase in pulse rate was most frequently observed. Occasionally marihuana smoking was associated with either no changes or a decrease in pulse rate. Tachycardia following marihuana smoking was generally more pronounced during the initial phase of the smoking period. This finding suggests that tolerance may occur with respect to marihuana induced increases in cardiac rate.

f. No significant electrocardiographic changes were observed in any subject during the period of marihuana smoking.

g. There was no apparent effect of marihuana smoking on exercise related cardio-vascular function, or upon such function following recovery from exercise. The initial exercise tests carried out during the pre-smoking control period revealed that 7 casual users and 7 heavy users performed in the fair to poor range.

h. Physical examination findings. All 20 subjects developed conjunctival injection during the marihuana smoking period, which tended to persist following cessation of marihuana use. Four casual and seven heavy users showed conjunctival injection throughout the last examination of the 5th post-smoking day.

Nineteen of the twenty subjects developed nystagmus during the period of marihuana smoking. The nystagmus persisted beyond the period of marihuana smoking. Five "casual" and six "heavy" users showed nystagmus as late as the 5th post-smoking day.

Sixteen of the twenty subjects developed fine tremors of the fingers during the period of marihuana smoking. These subjects, plus three other subjects, had tremors following cessation of marihuana smoking. One subject, 10H, did not have tremors at any time during the study. Tremors had remitted in all but 3 subjects on the 5th post smoking day. One subject, 2C, had a fine tremor of the fingers during all phases of the study. There were no significant changes in deep tendon reflexes during the study.

In summary, the data suggest no clear pattern of physical abnormality secondary to an average history of 5 years of marihuana use and 21-day period of repeat dose administration. The findings on vital capacity in particular suggest the need for population screening of chronic marihuana users for possible evidence of chronic lung disease. An increase in pulse rate secondary to marihuana administration disappears with repeated use, which appears to confirm the finding of tolerance to this effect of the substance.

E. Sleep-Wakefulness Behavior: It has often been reported in anecdotal accounts that marihuana has sleep-inducing properties, but there has been little systematic study of the effects of marihuana on sleep-wakefulness behavior. In the present research sleep-wakefulness behavior was observed continuously throughout 24-hour periods during all phases of the study. Ratings were made hourly by staff members as to whether subjects had been mostly awake or asleep during the preceding hour. Phenomenological ratings of sleep by trained observers have been found to be of value in studies of sleep patterns in alcoholic subjects.

Data describing the *amount* of sleep, number of discrete *episodes* of sleep, and *distribution* of con-

secutive hours of sleep occurring throughout the study are presented in Tables XIII, XIV, XV. Individual histograms of sleep-awake behavior are presented in Figures 1A-20A. Both initial sleep patterns and changes in these patterns during the course of the study were very similar for both casual and heavy users. During the 5-day pre-drug period, subjects displayed a normal, stable sleep pattern with a large percentage of total amount of sleep (84% in the heavy users and 90% in the casual users) occurring in blocks of 6 to 9 consecutive hours of sleep (an average of approximately 7 to 7.5 consecutive hours of sleep per day). During the smoking period sleep both increased in total amount and became more variable. Subjects slept an average of one hour more per day during the smoking period (approximately a 13% increase) compared to the non-smoking periods, and their sleep occurred within a wider range of daily hours of sleep. This phenomenon is highlighted by data presented in Table XIII by a comparison of the 5-day pre-drug period and the first 5 days of the smoking period. For example, only one subject in the casual user group slept 10 hours in one day during the pre-drug period, but in the first five days of the smoking period only one subject did not have at least one day of 10 hours sleep.

Tables XIV and XV show that following onset of the smoking period a bi-directional shift from the modal pre-drug sleep pattern occurred. An increased amount of total sleep in both shorter and longer blocks of consecutive hours of sleep was observed. Associated with this bi-directional shift there was also an increase in number of discrete episodes of sleep (periods of at least one hour of sleep separated by at least one hour of wakefulness) with the peak number of such episodes consisting of short (one to three hour) segments of sleep. The fragmentation (increased number of discrete episodes of sleep per day) and flattening (bi-directional shift in distribution of episodes) were most likely marihuana induced. This inference is supported by the abrupt appearance of these changes in sleep patterns following the onset of smoking and a tendency toward reappearance of pre-drug sleep patterns during the post-drug period.

In general, these alterations in sleep pattern were most distinct in casual users early in the smoking period, and this suggests that there may be a tolerance to the sedative effects of marihuana with repeated use.

F. Mood Assessments: Mood states of subjects were assessed with a Q-sort modification of a self-report instrument developed by Raskin and associates (1967). The Q-sort consists of 68 5" x 5"

cards. Sixty-four of the cards contain different adjectives or phrases which describe mood status (e.g. "depressed", "full of pep", etc.) and four cards contain instructions for placement of the card (e.g. "place in bin 3 upside down") which are used for validation purposes. Subjects were instructed to describe their moods by sorting the cards into four bins according to how accurately the adjectives or phrases matched their current mood. The bins were labeled: (1) "Not at all;" (2) "A Little;" (3) "Quite a bit;" (4) "Extremely." Tamerin, Weiner and Mendelson (1970) have reported that a factor analysis of results with this instrument had yielded eight factors: anxiety, hostility, guilt-shame, friendliness, carefreeness, cognitive-loss, fatigue and depression. Subjects completed this instrument to describe their mood: (1) each day of the study following testing on psychological performance tasks; (2) before and one-half hour after smoking marihuana on selected days.¹²

Results of mood assessments are presented in Figures 1C-20C and Tables XVIa-XIIk. An examination of sequential 5 day mean scores for the casual users (Table XVIa) indicates they reported a relative increase in negative mood states (anxiety, hostility, depression) and a decrease in positive mood states (friendliness, carefreeness) during the course of the study.¹³ This trend began with the onset of marihuana smoking and persisted through the post-smoking period. The persistence of this trend during the post-smoking period could be related to variables other than antecedent marihuana smoking (e.g., boredom, impending separation from newly formed friendships, etc.). However, it is also possible that the phenomenon was directly related to marihuana use and dysphoria observed during the post-smoking period may represent a sequelae of chronic marihuana smoking.

An examination of marihuana-related daily mood assessments by the casual users (Tables XVIa-XVIk) indicates that the acute effects of marihuana were associated with a reduction of negative affects (anxiety, depression, guilt-shame) and an increase of positive affects (carefreeness

¹² In the discussion of results, "marihuana-related daily assessment" refers to assessments that were scheduled to occur daily independent of marihuana smoking, and subjects chose to smoke marihuana within 90 minutes of the assessment. "Marihuana-related special assessment" refers to assessments that were scheduled to occur in conjunction with marihuana smoking.

¹³ The word "relative" is included in this sentence to emphasize that in the design of this research comparisons of subjects' mood states are to their own mood states at other times. That is, comparisons of subjects' mood states are not made to hypothetical or statistical normal mood states for the general population.

and friendliness). Similar acute effects were found in marihuana-related special assessments for the casual users. Subjects' mood states before smoking were generally positive in comparison to average mood during the smoking period. This suggests that casual users tended to smoke marihuana when they reported relatively positive mood states, and the effect of the drug was to increase these positive feelings. This relationship between mood and marihuana smoking has been commonly described in anecdotal literature and by persons who use the drug.

A possible discordant finding in the present research, however, was the apparent trend toward increased dysphoric moods reported by casual users during the course of the study. It is possible that this trend was related to research ward conditions and not marihuana smoking *per se*. However, it is also possible that the trend toward dysphoric moods may have been a compensatory rebound reaction following periodic occurrence of acute drug-induced euphoria.

Results of mood assessments for the heavy users indicate that the acute effects of marihuana smoking were similar but not identical to those observed in the casual users (Tables XVIIa-XVIIk). An examination of mean scores for before and after special marihuana-related assessments for the heavy users indicates a trend toward more euphoric moods after smoking marihuana. However, their mood states before smoking marihuana were not relatively positive as were the mood states of casual users before smoking. Also the heavy users did not show a trend toward dysphoric moods during the course of the study similar to that shown by the casual users. However, the mood states of the heavy users were more negative during the post-smoking period than they were during the pre-smoking and smoking periods. During the post-smoking period heavy users reported a slight increase in anxiety, hostility, fatigue and a decrease in friendliness and carefreeness. Perhaps the reason this dysphoric pattern was not found during the smoking period as it was for the casual users was because the heavy users smoked more marihuana on more occasions, and the frequent experiencing of the acute effects of the drug (euphoric) blocked the emergence of dysphoric moods during assessment times.

Although both groups of subjects generally reported positive mood changes after smoking marihuana (e.g. less anxiety and hostility and more friendliness and carefreeness) they also reported feeling *more depressed* at the same time. This paradoxical finding cannot be explained by data available from this study.

G. Psychological Assessments: Subjects were assessed daily for short-term memory, the time estimation and psychomotor skills. Tests for these functions were administered in the sequence described below at approximately 10 A.M. each day of the study. Subjects were free to smoke marihuana whenever they wished during the drug period. When they smoked within an hour and a half before a regularly scheduled daily assessment that assessment is termed a "marihuana-related daily assessment" in this report. Assessments also were scheduled to be carried out shortly after subjects smoked marihuana on selected days during the drug period. These latter assessments are termed "marihuana-related special assessments" in this report. A differentiation is made between "daily" and "special" marihuana-related assessments because during the former assessments subjects were less likely to be aware that their performances were going to be evaluated for acute effects of marihuana use. Also, the time between marihuana smoking and test performance varied between 0 and 90 minutes for the "daily" marihuana-related assessments while remaining at a relatively constant 30 minutes for the "special" assessments.

1. *Short-term memory function* was assessed by the Digit-Span (Forward and Backward) test. A series of digits of increasing length was projected for fixed time intervals, and subjects were instructed to write the digits on paper in the correct sequence. They were observed carefully to assure that they did not either reproduce the digits as they were being projected nor reproduce the digit-series backwards by writing right to left. Digits were projected at the rate of one per second, and a different list of digits was used for each assessment. The test was group administered, and subjects were paid five cents for each series of digits reproduced correctly.

2. *Time-estimation* was assessed with two 6-channel event recorders. Five channels on each recorder were connected to hand button-switches which were activated by subjects during the testing session. The remaining channel on each recorder was activated by the experimenter. Depression of the button on a hand switch produced a deflection of a pen on the recorders, and the pen would remain deflected until the button was released. The paper drive on each recorder moved at a constant speed (2mm/sec), and measurement of the length of a line produced by a deflected pen provided a direct measure of how long any button had been depressed. Subjects were instructed to make their time estimates by depressing the button on their hand switches for the length of the speci-

fied intervals of time to be judged. The experimenter depressed his button on a random basis to assure that subjects received no auditory cues from activation of recording pens.

During each testing session subjects were required to make eight time estimations which bracketed four time intervals of 10, 60, 90 and 180 seconds. For example, during one session subjects estimated time intervals of 75-50-180-9-70-105-11-180 seconds in that order; the next session they estimated time intervals of 60-7-170-85-190-13-95-60 seconds and so on. A total of 28 different time intervals in different combinations were estimated during the course of each study to partially offset practice effects. The test was group administered, and subjects were paid five cents for each correct time estimation within plus or minus ten percent error.

3. *Psychomotor performance* was assessed with an enclosed "shooting gallery" device (a type commonly seen in amusement centers). The device consists of a mock rifle on a swivel and a variety of military targets both stationary and moving. The targets when "hit" with an electronic eye beam from the rifle automatically registered specified scores. The score values of different targets changed with each "shot" so that the maximum score-producing target did not remain constant. Each trial consisted of 25 shots with 10 additional shots if a subject achieved a score of 5,000 or more points on the first 25 shots. Subjects were paid one cent for each 300 points scored on this task.

4. *Results.* The results of subjects' performance on the digit-span test are presented in Figures 1A-20A and Tables XVIIIa-XIXk.¹⁴ Both groups of subjects had a steady improvement in digit-span performance (both forward and backward) during the course of the study. Improvement with practice normally would be expected, and this practice effect indicates that repeated use of marihuana did not significantly inhibit the ability of subjects to improve their performance through time. The design of the present study did not permit an answer to the question of whether there would have been more of an improvement with practice in the absence of marihuana use.

Despite the overall trend toward improvement in performance, there was a decrease in efficiency of performance by the casual user group during the first quarter of the smoking period (Table XVIIIa). A significant decrement occurred during the first few days of smoking in both groups

¹⁴ The high digit-span scores obtained by subjects can be attributed to both their above average intellectual levels and the fact that the test items were presented visually rather than orally.

of subjects (Figures 1a, 8a, 9a, 14a, 17a, 18a). This decrement in performance appears to be related to the acute effects of marihuana smoking. Further indication of an acute impairment associated with marihuana smoking is shown by examination of mean scores for "marihuana-related daily assessments" for both groups of subjects (Tables XVIIIa and XIXa). Efficiency of performance on the digit-span test decreased during these assessments compared with average performance during both nonsmoking and smoking periods.

Examination of mean scores for marihuana-related special assessments (assessments that were scheduled to occur within one-half hour after marihuana smoking) also indicate a short-term memory deficit was associated with marihuana smoking in both groups (Tables XVIIIa and XIXa). However, this deficit was not as large as the one occurring during marihuana-related daily assessments when subjects were less aware that performances would be evaluated for acute effects of marihuana smoking. It may be that this awareness increased subjects' motivation for accurate performance during marihuana-related special assessments in order to disprove the view that "marihuana is harmful" (an intention that was explicitly stated by some subjects).

In summary, results of the digit-span test suggest that marihuana smoking had a relatively mild acute effect on short-term memory and no discernible effect on the ability to improve performance with practice.

Results of subjects' performance on the time-estimation test are presented in Figures 1a-20a and Tables XVIIIa-XIXk. A comparison of mean scores for marihuana-related assessments with mean scores for the total drug period indicates that an acute effect of marihuana smoking is underestimation of time passage (i.e., real time appears to pass more slowly).¹⁵ This effect has been reported by other investigators (Melges, et al., 1970).

Repeated testing on time estimations under normal conditions usually leads to either a stabiliza-

¹⁵ The terms underestimate and overestimate often are confusing when used in connection with time perception. In research studies, the tendency is to use the term that best fits the operational procedures. Thus, when a subject is presented with a tone that is activated for 60 seconds and he estimates that the tone was activated for 70 seconds the recorded response is an overestimate. When a subject is requested to activate a tone for 60 seconds and he activates the tone for 50 seconds the recorded response is an underestimate, i.e., he has underestimated the length of a true 60 second time interval. Of course, the interpretation of results in both procedures would be the same and could be stated in either of two complementary ways, i.e., "real time is slower than subjective time" or "subjective time is faster than real time."

tion of initial estimates or a trend of estimates toward true time-intervals. However, results in the present study show a tendency for subjects in both groups to increasingly overestimate time passage with repeated testing. For example, mean time-estimates increased by approximately 7% from the first 5 days to the last 5 days of the smoking period (Tables XVIIIa and XIXa). The occurrence of a trend toward overestimation of time in the present study may represent a compensatory or rebound reaction to the acute effect of marihuana smoking. That is, it is possible that an effect of repeated doses of marihuana may be overestimation of time passage in contrast to the acute effect of underestimation.

Results of subjects' performances on the psychomotor assessment are presented in Figures 1a-20a and Tables XVIIIa-XIXk. There was a consistent trend toward improved performance during the course of the study for both groups of subjects. This finding indicates that marihuana smoking did not inhibit subjects' ability to improve with practice. However, as pointed out for digit-span performance, the present study was not designed to determine if there would have been more improvement with practice in the absence of marihuana.

The casual and heavy users differed on their performances during marihuana-related assessments. The casual users had no decrement in performance during marihuana-related daily assessments and a slight increase in performance during marihuana-related special assessments (compared to non-marihuana-related assessments). The heavy users, on the other hand, had a decrease in performance during both marihuana-related assessments as compared to non-marihuana-related assessments (note Figures 13a, 14a, 20a). The lack of a decrement in marihuana-related performance for the casual users may be due, in part, to subjects' reports that they tried harder for accuracy during these assessments. Subjects in this group also stated that they found the military connotations of the shooting gallery more humorous and less objectionable when they were under the influence of marihuana.

H. Cognitive and Motor Function: The chronic and acute effects of marihuana ingestion on cognitive function was studied through serial evaluation of all subjects with a battery of psychological tests commonly used to assess various aspects of brain function.¹⁶ Each subject in both the casual user group and the heavy user group was evaluated on three occasions. The initial

evaluation was carried out during days 1 and 2. The second evaluation was made during days 22 and 23, and the third evaluation occurred on day 26. During the inter-test interval, subjects' use of marihuana was documented. The third evaluation was designed to investigate the possible acute effects of marihuana ingestion on psychological test performances, and for that reason the final evaluation of each subject began approximately 30 minutes after the first marihuana cigarette was smoked on that day by each subject.

Evaluation Instruments. The psychological assessments used in this study were derived from a battery of tests that has been extensively employed during the past two decades to evaluate the efficiency of brain function (Reitan, 1963). The specific tests used in evaluating the subjects participating in this study included the Wechsler Adult Intelligence Scale plus the following instruments:

1. The Halstead Category Test. This test measures complex non-verbal concept formation ability. The test requires the subject to form and apply concepts on the basis of recurring similarities and differences of visual stimuli. The stimulus materials included 208 35mm. slides which are divided into seven groups. In the first six groups, a concept is presented, and if the subject infers the concept correctly, he can then apply it to stimuli delivered in each of the subsequent slides. The subject was instructed to press an answer button for each slide and was "rewarded" or "punished" with a bell-buzzer system. The bell informed the subject that his answer was correct, and the buzzer if the answer was incorrect. The task of the subject was to modify his answers on the basis of the feedback information so as to attain the correct concept as quickly as possible. The seventh group of the Category Test was a memory subtest. The subject's score for the Category Test was the number of incorrect answers.

2. The Tactile Performance Test. This procedure measures complex psychomotor problem solving ability. The test consists of a ten-block form board which is placed on an upright stand in front of the subject. Before the test begins, the subject is blindfolded and then instructions for the test are given. The subject is told to put each block in its correct place as rapidly as possible using only his dominant or preferred hand. Upon completion of the first trial, the subject is then told to perform the same procedure again using only his non-dominant hand. Finally, a third trial is administered with the subject using both hands.

Upon completion of the third trial, the board and blocks are put away and the blindfold is

¹⁶ These studies were carried out by Dr. Homer Reid of Tufts University and members of his staff.

removed from the subject. The subject is then told to draw the outline of the board from memory and to draw as many of the blocks as he can remember, putting each block in its correct location.

The Tactual Performance Test yields three scores. One score is the total time the subject uses over all three trials. A second score is based on the number of blocks that the subject correctly remembers. The third score is the number of blocks that the subject can correctly localize.

3. *Seashore Rhythm Test.* This test consists of thirty pairs of rhythms which are presented with a tape recorder. For each rhythm pair the subject must decide whether the members of the pair are similar or different. He indicates his answer by writing *S* for same or *D* for different on an answer sheet provided for him. The test is scored in terms of the total number of correct answers.

4. *Finger Tapping Test.* The instrument used for this test is a manually operated counter attached to a short tapping arm. The subject is instructed to tap, using the index finger of the dominant hand, as rapidly as possible for a ten-second interval. The subject is given a few practice trials and then is required to tap for a series of ten-second intervals. When the subject achieves five consecutive trials in which there is a range of no more than five taps, the test is discontinued. The score for this test is the average of the five trials. This test is also administered to each subject using the index finger of the non-dominant hand.

5. *The Trail-Making Test.* The Trail-Making Test is a two-part measure of perceptual speed and accuracy. Part A requires the subject to connect circles in sequence from 1 to 25. In Part B the subject has to alternate between ascending numerical and alphabetical series (1-A-2-B-3-C-4-D, etc.). Each part of the test is scored in terms of the seconds required for completion.

Results. Table XX and Table XXI present the three means for each of the test procedures for casual and heavy marihuana users respectively. The two groups did not differ significantly on any of the procedures, and the practice effects from the first to the second to the third evaluation occur when expected.

The results of the Wechsler Scale clearly indicate that both groups are of superior intellectual ability. For the test procedures other than the Wechsler Adult Intelligence Scale, all means are well within normal limits. Both groups function on these tests at about the level that would be predicted based on their I.Q. scores. Thus, the group data does not show any alterations in performance associated with either acute or repeat dose effects of marihuana intake.

In addition to the simple statistical analysis outlined above, each of the 20 individual test protocols was reviewed in detail by a psychologist specially trained in the use of this battery of tests. Analysis of the 20 protocols reveals that two individuals in the casual user group (C1 and C10) and two individuals in the heavy user group (H3 and H8) performed much less well than expected on the battery of tests.¹⁷ It is not possible to make specific inferences from any of the four protocols other than to note that in each case the I.Q. scores seem to be misleadingly high. In other words, none of the four individuals function at a level on some parts of the test battery that would have been expected given a knowledge of the individual's intelligence level and educational background. No neurological impairment was found in these subjects, but impairment in performance on this test battery in each instance was unequivocally present. It is not possible to make any precise interpretation of this impairment. It is quite possible that the impairment is related to the subjects' previous drug history, but other subjects with similar drug-use histories showed no impairments on the test battery.

Summary. Both the casual users and the heavy users were individuals who were relatively well-educated and who had I.Q. scores in the high-average to superior range. No impairment of performance in the tests of cognitive and motor function were observed prior to, during or following either acute or 21 days of marihuana smoking. Two of the individuals in each group performed less well than would have been predicted on the basis of their I.Q. scores and educational backgrounds. Whether or not the impairment of performance was related to prior drug histories cannot be definitely ascertained.

I. Social Behavior: Although marihuana is characteristically used in a small group setting, little is known about the changes in social behavior which take place during and after the act of "turning on." There is some evidence to suggest that marihuana exercises subtle effects on verbal behavior (Weil and Zinberg, 1969). Smokers report that verbal interaction is a typical part of the marihuana experience and that the type of interaction is sometimes affected by whether or not other members of the group are high (Haines and

¹⁷ Both subjects H3 and H8 did poorly on Trail-Making and failed to show consistent patterns of improvement in performance with re-testing. Subject C10 showed initial deficit in the Halstead Category Test and on the Rhythm Test, but his improvement with re-testing was consistent with good brain function. Subject C1 did poorly initially on the Tactual Performance Test and failed to show consistent improvement with re-testing.

Green, 1970). The following aspects of social behavior were investigated in this study:

1. Marihuana smoking patterns of small groups.
2. Verbal interactions in formal discussion groups.
3. Group problem-solving efficiency.
4. Risk-taking behavior in a realistic gambling situation.

1. *Marihuana Smoking Patterns in Small Groups.* Marihuana use, in addition to being a subjective experience, at the same time constitutes participation in a particular social group. The present investigation provided an excellent opportunity to study both social and psychological aspects of marihuana smoking by different types of users. Over a period of twenty-one days, systematic observations were made of individual and group smoking patterns each time a marihuana cigarette was distributed. Subjects were informed that they could smoke whenever and wherever they chose, provided that each cigarette was consumed within the confines of the ward and in the presence of a researcher. Typically, one or two subjects would initiate a request to smoke marihuana. After determining where the marihuana was to be consumed (e.g. television room, subject's bedroom, nurses' station, etc.), the researcher would obtain an adequate supply of cigarettes from a locked cabinet and begin distribution. During the time each cigarette was being consumed, the following data were recorded: (1) name of subject; (2) time smoking began and ended; (3) ward location; (4) names of other subjects present in the immediate proximity of the smoker; (5) frequency of communication (e.g. constant, frequent, little, none); (6) type of activity which best characterized the individual or group; (7) self-ratings of subjective level of intoxication before and after smoking; (8) pulse rate before and after smoking. (Note: the latter two measures were obtained on alternate smoking days for heavy users only.)

A. *Temporal Distribution of Smoking Occasions.* For the purpose of the present discussion, an individual smoking occasion was defined as a discrete period of time during which a subject smoked one or more marihuana cigarettes. On such occasions, subjects typically smoked as much marihuana as necessary to achieve a desired level of intoxication. Table XXII shows the temporal distribution of individual smoking occasions by period of day for both casual and heavy users. The totals show that heavy users "turned on" almost twice as many times ($N=1184$) as the casual users ($N=645$). Examining the percentage distributions by period of day, the data indicate that

both types of users smoked most frequently during the evening. Heavy users, however, had a significantly greater proportion of smoking occasions later in the day, especially during the evening hours ($X^2=11.6$, 2df, $p<.01$).

It is not surprising that subjects showed a preference for smoking during the evening hours. While it was not uncommon for a subject to become intoxicated before or during various scheduled activities, in general there was a marked preference for subjects to smoke when they knew that experimentally oriented activities were not required. Few required activities were scheduled after 6 P.M., thus subjects were free to smoke marihuana and to engage in their preferred leisure-time interests without interruption.

B. *Individual Smoking Patterns and Psychological Effects.* On the average, subjects required between ten and fifteen minutes to finish each marihuana cigarette. The onset of psychological effects was almost immediate, as determined by self-ratings of level of intoxication. Unfortunately, these data are incomplete for the casual users. However, on alternate marihuana smoking days during the second study, heavy users rated themselves after each cigarette in terms of how high they felt at that time. Ratings were obtained on a ten-point subjective intoxication scale, based upon the following question: "In comparison to the highest you've ever been on grass, rate on the scale below how stoned you feel now." Response categories ranged from "No effect, not high at all" (0), through "Mildly high" (2), "Moderately high" (5), "Very high" (8) and "Highest ever" (10).

Ratings obtained on alternate smoking days were average for each subject. The means range from a low of 3.05 for subject 2H to a high of 6.85 for subject 5H. Individual ratings ranged from 0 to 9 with a grand average of 5.82 for all cigarettes rated.

There was no significant relationship between day of smoking and ratings of subjective intoxication (average Pearson $r=-.11$), suggesting that tolerance to subjective effects did not occur as the smoking period progressed. Changes in subjective effects were also examined on a daily basis. For each subject, comparisons were made between the average ratings of the first and last cigarettes of each (alternate) smoking day. For the ten heavy users, the first cigarette of the day was rated, on the average, 5.04, while the last was rated 6.39. The Wilcoxin matched-pairs assigned-ranks test indicated that the differences between the means were highly significant ($p<.001$). Further research is called for to determine whether this difference is attributable to a general reduction in

physiological tolerance toward the end of the day, to the accumulation of THC, or to other underdetermined factors.

On almost all occasions, subjects in both groups inhaled the smoke deeply and in large amounts. When the cigarette had been smoked to a point where it became difficult for the subject to hold it between his fingers, various types of "roach holders" were frequently used to permit further smoking. Roach clips ranged from momentary improvisations, such as kitchen forks or rolled matchbook covers, to homemade and commercial devices. Roach clips also permitted a procedure known as "snorting." This consisted of lighting the remaining portion of the butt with a match in order to inhale through the nose the resulting smoke. An analogous procedure, demonstrated by several of the heavy users, was called "shotgunning." One subject would place in his mouth the cigarette of another, lighted end first. He would then exhale sharply, thereby exuding a steady stream of smoke which the other subject would inhale through his nose or mouth. All of these procedures indicate that subjects were highly preoccupied with technical aspects of the smoking experience, especially with those aspects which would help them obtain the maximum effect from the marihuana.

C. Group Activity and Communication. Observations were made of the activity and communication patterns of freely formed small groups on each occasion when marihuana was distributed. From the beginning of the first day of marihuana availability, when 9 of the 10 casual users gathered together for their first cigarette, it became apparent that the smoking experience was a focal activity around which groups formed.

Marihuana was distributed to casual users for a total of 277 occasions and to heavy users for 301 occasions. Since the casual users smoked approximately half as many cigarettes as the heavy users, it would appear that the heavy users were smoking in larger groups.

Data relevant to this question are presented in Table XXIII which shows the average number of subjects smoking per occasion for both types of user. Data are also presented for average group size, based upon the number of smokers and non-smokers present at the time marihuana was distributed. The means show that an average of 2.29 casual users smoked per occasion, with 3.93 for the heavy users. Chi square analysis of the frequency distributions showed that significantly more heavy users did indeed tend to smoke when cigarettes were made available ($X^2=77.7$, 8 df., $p<.001$). Thus, it appears that a primary difference in smoking patterns between casual and heavy users is that more of the latter will form groups and smoke

when marihuana is available. This finding is corroborated by data based on observations of the total group size during the smoking occasions. The mean for heavy users (4.20) shows that total group size was, on the average, about the same as the number of individuals smoking (3.93). For the casual users, however, the average group size (3.27) was appreciably larger than the number of smokers (2.29), indicating that non-smoking casual users were frequently present while marihuana was being distributed.

The results of observational data summarizing the communication and activity patterns of these smoking groups are presented in Tables XXIV and XXV respectively. Table XXIV shows the raw and percentage distributions of smoking groups according to the frequency with which the marihuana smokers engaged in communication, either among themselves or with the researcher. The data are based upon ratings of each smoker by the researcher during the smoking occasion. These ratings were combined to obtain the average frequency for each smoking group. The results indicate that the casual user groups engaged in significantly more ($X=64.5$, 4 df., $p<.01$) interaction than did the heavy users. No communication was observed in 31.89% of the heavy user groups, as compared to only 10.47% of the casual user groups. Conversely, frequent communication was observed in 42.60% of the casual user groups, as opposed to 18.28% of the groups of heavy users.

With respect to type of activity engaged in while smoking, Table XXV presents the numerical and percentage distributions of smoking groups according to the type of activity which best described the majority of its members. The results indicate that watching television, listening to music, and talking were the most typical activities for both types of user during smoking. Casual users, however, showed a marked preference for watching television, while the heavy users tended to listen more to music. And, as the previous data on communication patterns suggest, talking was not uncommon activity for both casual (21.66%) and heavy user (26.58%) groups.

Discussion. The present data indicate very strongly that marihuana smoking, in addition to being a subjective drug experience, is also a social activity around which verbal interaction and other types of social behavior are centered. Rarely did subjects choose to smoke alone. Less than 6% of all the marihuana consumed by either group was smoked in a place where other subjects were not present. Typically, one or two subjects would actively organize a group smoking session by asking the researcher to initiate distribution and by actively enlisting other subjects into the group.

Although the data indicate that both types of user tended to smoke in groups, the results also suggest that heavy users were more inclined to join their comrades once the smoking occasion had been initiated. This readiness to indulge, but not necessarily to initiate, might indicate that the heavy smokers were more influenced by group pressures than the casual users. In the case of the former subjects, marihuana use is a pivotal activity around which much of their lives revolve. It would seem likely then that the norm for heavy smoking would be stronger for the heavy users, not only because smoking was for them a primary means of reinforcing group solidarity, but also because each heavy user shared expectations of how other heavy users were supposed to act in that type of situation.

Even though marihuana smoking tended to be a group centered activity, subjects did not always engage in verbal interaction while smoking. It was not uncommon to observe some or all of the subjects withdrawing from interaction during the smoking occasion. This usually took the form of some type of passive activity, such as watching television, listening to music, reading or merely staring at objects or other people.

Heavy users tended to be more withdrawn than the casual users during the smoking occasion, as indicated by their significantly lower frequency of communication. This may in part be the result of limitations imposed by the high noise level of the stereo phonograph, but further analysis of the data showed that even with type of activity held constant, the heavy users tended to interact less than the casual users. This is not surprising in view of the fact that the heavy users tended, on the average, to be less verbal even during the baseline period, as indicated by their interaction levels during formal group discussions (see next section).

The fact that the heavy smokers tended to be less verbal before and during marihuana smoking does not explain, however, their distinctive preference for listening to music while smoking. For both groups of users, a stereo photograph and a television were available for use in the recreation lounge, the room where most marihuana was consumed. A possible explanation for the observed differences in communication and activity patterns would be that the heavy smokers were more inclined to seek the personal effects of the drug while the casual users were more inclined to emphasize the social effects; thus, listening to rock music may have been the activity most conducive to the enjoyment of such personal effects as contemplation and introspection. Watching television, on the other hand, tends to provide a greater

opportunity for group entertainment and conversation, both possible means of enhancing the social effects of marihuana.

2. *Verbal Interaction in Formal Discussion Groups.* Data discussed in the previous section indicate that casual users differ significantly from heavy users in frequency of interaction during marihuana smoking. A question which remains to be answered, however, is how interaction during and after marihuana smoking differs from behavior when marihuana is not available. This problem was systematically investigated through observations of task-oriented discussion groups. Five-person groups were observed before, during and after the twenty-day marihuana smoking period. It was expected that the use of marihuana by group participants would affect the rate, amount and quality of group interaction.

Method and Procedure. Each afternoon during the three phases of the study, subjects were convened for task-oriented group discussions. On selected days, participants were assigned to one of two five-person groups which met concurrently in separate rooms. Group membership was systematically varied from session to session in order to prevent the formation of a permanent status hierarchy and to provide discussants with a greater variety of opinions and viewpoints.

At the beginning of each session subjects were presented with a questionnaire booklet containing a discussion topic and a set of questions. Half the discussions were based upon a series of moral conflict problems, each one describing an hypothetical situation involving conflicting obligations or choices of actions. The remaining meetings were devoted to the discussion of Charles Morris' (1956) *Ways to Live*. Each way consisted of a capsule summary of a different life style common to a particular cultural group of a historical period.

All discussions were similar in terms of participant functions and the interaction requirements. Following an initial reading of the topic, each subject was instructed to record his personal opinion. If he was considering a *Way to Live* he was asked to record on a seven-point scale the degree to which he liked or disliked that particular life style. Similarly, if he was reviewing a moral conflict problem, he answered two questions about the position he would take in the conflict situation. Next, the subject was asked to discuss the topic with the other members of the group for approximately 30 minutes. The stated task of the group was to arrive at a consensus as to the response category or categories which best reflected the opinion of the group. After the discussion was completed the group opinion was recorded and

subjects were instructed to answer several remaining questions. One of these pertained to the individual's private opinion after discussion. He was asked to reconsider his opinion and to record his private opinion regardless of the way it differed from his initial answer or from the group choice. A final question, included only during the marihuana smoking period, instructed the subject to record on a ten-point scale his subjective level of intoxication.

Each discussion was tape recorded by a staff member who also served as group moderator. The interaction tapes were analyzed by two trained coders according to a modified Bales (1950) category system. For the purpose of greater simplicity and reliability, only four categories of interaction were coded: (1) positive reactions, e.g. showing solidarity, showing tension-release, joking; (2) personal disagreement or antagonism toward other participants; (3) attempted answers, e.g. giving suggestions, opinions or information; (4) questions. These correspond roughly to Bales' four major content areas with several exceptions. Since we were initially interested only in verbal behavior, laughter was coded separately instead of as an instance of positive reactions. Further, in order to separate person-oriented acts of disagreement or antagonism from instances of general disagreement, the latter were coded as attempted answers. Each unit of verbal behavior was coded in terms of the type of interaction which appeared to dominate the act. The unit of interaction was taken as a phase or sentence which conveyed a coherent thought or meaning. Intercoder reliability was checked routinely and was found to be high. (Average Scott's reliability coefficient [Bales, 1950] .85 or greater.)

Results. Thirty-six groups of casual users were observed over the three phases of the study: six groups during the pre-marihuana period, 24 during the marihuana smoking period, and six again in the post-smoking phase. Although all interaction was coded for each member of the groups separately, results were combined and the group itself was used as the unit of analysis. In order to evaluate the influence of marihuana on group performance, subjects were classified as either "high" or "not high" on the basis of the time when they last smoked marihuana and their subjective ratings of intoxication. Using these criteria, it was determined that during the marihuana period 23 of the 24 groups contained at least one subject who was at least "mildly high." On the average, groups were evenly balanced ($\text{Mean}=2.5$) from the beginning to the end of the smoking period between participants who had smoked marihuana prior to the discussion and those who had not.

In the first part of the data analysis, the rate, amount and quality of interaction were compared over the three phases of the study. Results of the casual user groups are shown in Table XXVI. A measure of rate of interaction was based upon the number of verbal units produced per unit of time. The discussions varied in length from 7 to 32 minutes with an average length of 16 minutes. Using the number of acts per minute as a measure of interaction rate, the results indicate the pace of the discussions remained relatively constant until the post-smoking period, when the rate of talking tended to increase.

Examining the results for average total output, the data indicate that the amount of interaction decreased sharply during the initial part of the marihuana smoking period. Whereas total output averaged 325.5 units of interactions during the baseline period, it dropped to less than two-thirds of this level (206.0) when marihuana became available to group members. The amount of interaction continued to decline throughout the smoking period but showed a slight increase during the post-marihuana phase. These data indicate a progressive trend toward reduced output over the course of the study but they also suggest that the use of marihuana contributed to this decrement.

Turning to the distributions of responses across interaction categories, the means of the raw data show decrements in all categories except questions during the initial part of the smoking phase. The average number of questions tended to remain constant until the last part of the marihuana period. Except for a slight increment in attempted answers during the post-smoking period, there was very little change in the incidence of positive reactions, personal disagreement, and questions after marihuana was withdrawn.

Although the means based upon the raw data give an accurate summary of quantitative differences in interaction, they do not reflect the qualitative changes which took place in the average group profile over the course of the study. These changes become evident when one examines the proportional distribution of responses across categories. The average group percentage profiles indicate that the relative amounts of positive reactions and questions increased slightly during the marihuana period, then declined almost to the pre-smoking baseline levels when cannabis was no longer available. Attempted answers, on the other hand, declined sharply during the smoking period but increased again during the final non-marihuana sessions. The proportions of personal disagreement tended to remain constant throughout. Thus, when the overall patterning of responses is considered by means of the percentage profile, it

appears that there is a tendency for discussions to become less task-oriented when at least some of the participants are high.

As one would expect, heavy users smoked marihuana more frequently before and during group discussions. On the average, between three and four (mean 3.6) participants reported themselves at least "mildly high" for any group discussion and the ratio of smokers to non-smokers remained constant throughout the entire course of marihuana period. In the same study of heavy users, a total of 40 group discussions were observed: 24 during the marihuana period and eight each during the pre- and post-phases. The results are summarized in Table XXVII.

With respect to rate of interaction, the mean results show that there was a tendency for fewer acts per minute to be spoken during the smoking period. On the average, the topics were discussed 11.5 minutes, a figure well below the mean of the casual users (16 minutes).

Examining the results of total output, the means show that total interaction declined in the initial phase of the marihuana period from the baseline average of 137 units per discussion to a low of 88.3. Total output tended to increase during the remaining portion of the smoking period, and showed another increment in the post-marihuana phase. Turning to the distributions of responses across interaction categories, the means of the raw data indicate that positive reactions increased progressively over the marihuana smoking period and continued to rise after cannabis had been withdrawn. The incidence of personal disagreement remained relatively constant while the average amount of questions showed no consistent relationship to the presence or absence of marihuana. Only in the category of attempted answers do the results show a clear relation to marihuana smoking. The averages indicate a tendency for task-related discussion to decline when marihuana is used over a period of time, especially during the early stages of availability. The percentage profiles also support this conclusion.

Discussion. The most consistent finding from both studies is the marked initial decrement in total interaction during the first part of the marihuana smoking period. While the heavy users tended to exceed pre-smoking levels of interaction in subsequent sessions, total interaction among casual users continued to diminish. These results suggest that the heavy users accommodated themselves better to the long-term effects of cannabis. Since heavy user subjects tended to consistently report similar levels of subjective intoxication throughout the smoking period, it is conceivable that this result is more a function of learning to

accommodate better to the demands of the social situation than it is an indication of a general tolerance to the effects of the drug.

The quality of interaction also showed some predictable changes, under marihuana, although the trends were more pronounced for the casual than for the heavy users. Both groups tended to become more convivial and less task-oriented, as evidenced by the general increase in proportion of positive reactions, and the concomitant decrease in attempted answers. One confounding influence which may have been operative is the effect of developing friendships among group members. One would not expect positive reactions to decrease at the end of the study, and this was indeed the case for heavy users. Further analyses will be necessary to determine the exact relationship between dosage level and individual verbal behavior, with a suitable control for the effect of time.

Whether the observed changes in interaction quality and talkativeness reflects a diminished capacity or willingness to engage actively in a task-oriented discussion cannot be clearly determined. All groups evidenced a high degree of task-oriented behavior during the marihuana smoking periods and at no time did a group fail to arrive at the stated goal of consensus. However, casual users, interviewed at the end of the study, stated that they found the task more boring and uninteresting when high, and felt more aware of the artificiality of the experimental situation. Thus marihuana may function to alter the way an individual perceives a social situation, and he may make subtle modifications in the quantity, rate and quality of his interaction as a result.

Salzman and Kochansky of the Psychopharmacology Research Laboratory at the Massachusetts Mental Health Center participated in observations of some groups during drug-free and marihuana access periods. Their specific interest concerned the effects of marihuana upon hostility as measured by (1) the self-report Buss Durkee Hostility Inventory; (2) a Hostility Interpersonal Perception Scale which allows individuals to rate their perception of hostility in other group members; and (3) experimenter ratings of interpersonal hostile communication based upon analyses of timed segments of group interaction which were scored on the same scale as (2). Three independent ratings were made of each interaction based upon the taped records of the group interaction. Because of the pilot nature of their study, conclusions were only tentative; but, marihuana did not appear to increase hostility. Moreover, it appeared that hostile communication during groups when some members were intoxicated tended to be indirect (as sarcasm) rather than direct (as criticism).

3. *Group Problem Solving Efficiency.* Modifications of the familiar parlor game, Twenty Questions, have been employed by numerous investigators to study information seeking and cognitive behavior in both individual and group situations. Typically, subjects are presented with a finite set of objects and are asked to determine which one the experimenter had in mind. This can only be accomplished by asking questions which can be answered "yes" or "no" by the investigator.

This task seemed particularly appropriate for the present investigation because it creates a situation in which a variety of social and cognitive behaviors can be studied. Specifically, the task was employed in this study to investigate the relationship between marihuana use in a small group setting and the following dependent variables: (1) ability to suggest and propose efficient questions; (2) motivation to participate in a competitive game.

On six occasions during both the casual user study and the heavy user study, subjects were organized into two-five person teams. Each team played four or five games of Twenty Questions concurrently in different rooms. On the first meeting the rules of the task were explained. Several practice games were played in order to familiarize the subjects with the task and to minimize the effect of practice on later sessions. Each team was seated in full view of a large poster board which contained 42 pictures, each depicting a familiar object. Subjects were instructed to work as a team in formulating suggestions and proposing questions to the experimenter. Typically, subjects would make suggestions among themselves, discuss the relative merits of each, then propose to the experimenter the question they considered to be the most efficient. Subjects quickly learned that the most efficient questions were those that eliminated half the alternatives remaining on the board.

In order to generate a spirit of competition, participants were told that the team achieving the correct answer in the least number of questions would win \$1.00. Immediate feedback was provided to the winning and losing teams after each game. Except for one instance of apparatus failure, tape recordings were made of all sessions. These tapes, coded initially for suggestions and questions, provided the basis for the present analysis.

Excluding a practice session on Day 2, all subjects met to play Twenty Questions on five occasions. The sessions were equally spaced over the three phases of the study. Casual users played four games per meeting while heavy users played five. During the marihuana smoking period, self-ratings of subjective intoxication were obtained after each meeting. Casual user teams varied from

two to four (mean=2.7) in number of subjects who reported themselves at least "mildly high"; heavy user teams ranged from three to five (mean=3.7) in number of subjects reporting themselves to be high. For the present analysis of overall performance, only a group data will be considered.

Results. Two types of problem-solving behavior were coded: number of original suggestions proposed in the course of group discussion, and number of questions formally addressed to the experimenter by a representative of the team. It was expected that the former measure would reflect the team motivation to exchange ideas relevant to the task, while the latter would reflect problem-solving efficiency. Table XXVIII summarized the results for the two competing casual user teams. The results show that both suggestions and questions remain constant for both teams up until Day 20. At this point Team A indicated a change in both indices, with suggestions dropping to an average of 7.7 and questions increasing to 12.6. This trend became pronounced in the post-marihuana session, where subjects in both teams ceased making suggestions within the group. As the means show, both teams performed least efficiently during the last session.

The means of the heavy user teams are presented in Table XXIX. A moderate reduction in the incidence of both suggestions and questions can be noted on Day 7, the first session during the marihuana smoking period. Performance remained relatively stable during the remaining sessions of the smoking period. In the last (post-smoking) session, efficiency decreased slightly for both teams, while the number of suggestions increased for Team A only.

Discussion. In general, teams of both types of users performed the task more efficiently during sessions when marihuana was available to group members. However, there was also a tendency for suggestions to diminish during the marihuana smoking period. Instead of generating numerous suggestions, considering the merits of each, and then proposing the best one to the experimenter, teams showed a tendency to adopt the first or second suggestion proposed by a fellow team member.

Although progressive familiarity with the game may have reduced the necessity for considering many suggestions, this change may also reflect an overall reduction in motivation to perform the task. This is best illustrated by the performance of Team A of the casual users. In the last game of Day 20, subject #1 suggested that the team switch to a guessing or "hypothesis scanning" strategy. In this procedure, participants

simply ask questions applying to one object at a time, thereby testing only specific, self-sufficient hypotheses. The most efficient strategy, employed effectively up until this game, was that of "constraint seeking." This is an attempt, through the use of general questions, to eliminate exactly half of the remaining alternatives with each question. In switching to the less efficient strategy, subjects in Team A indicated a reduction in motivation both to perform the task efficiently and to compete with the other team.

This trend was carried over into the final non-marihuana session. Before the final series of games, members of both teams agreed to compete according to the less efficient guessing strategy and this is reflected in the sharp increase in questions for both groups. No such radical changes took place during the games between heavy user teams. However, there did seem to be a tendency for heavy user teams to show less motivation, but paradoxically, greater efficiency during the marihuana smoking sessions. Again, progressive familiarity with the task may have been a factor contributing to these changes, and further analysis of individual performance will undoubtedly provide a clearer picture. At this point, however, it would appear that while marihuana does not seem to impair group problem-solving efficiency, it may contribute to a reduction in motivation to participate in a competitive task of this type.

Unfortunately, systematic observations were not made for other types of competitive activities. However, ward personnel did not note any tendency for subjects to avoid competitive games while high. Activities such as ping-pong, volley ball, Monopoly, and various card games were constantly in progress during the smoking period while subjects were under the influence of marihuana. No apparent differences were noted between the frequency and quality of their usual behaviors before and after marihuana smoking.

4. *Risk-Taking Behavior.* Another aspect of behavior studied in the present investigation was the effect of marihuana on decision-making under conditions of risk. A growing body of research (Kogan and Wallach, 1964) and theory suggests that risk-taking behavior is quite general in a variety of contexts, and that such behavior can be studied reliably in an experimental setting. In view of the possibility that marihuana may function to enhance such tendencies, a measure of risk taking was administered at various times during the course of the study. The measure employed was the Chance Bets Instrument developed by Kogan and Wallach. The device consists of matched pairs of dice bets varying in terms of the amounts of money to be won or lost (from .05¢ to

\$4.80), and in terms of the probabilities of winning and losing (from 1/9 to 3/4). Alternate forms of the instrument, each containing 16 comparable pairs of dice bets, were administered five times during the study (once during the pre-marihuana period three times in the marihuana phase after the subject had finished a cigarette, and once again during the post-marihuana period). All bets were of zero expected value. For each pair the individual was instructed to choose the bet he would prefer to play. In order to assure that the subjects were involved in the task, they were told that they would be gambling their own earnings and that their choices could be played only at the end of the study. In point of fact, no subject was required to gamble his own money. Subjects were informed of this after they placed their last bet, at which time they were allowed to play all of their previous choices with the understanding that all losses would be forgotten and all winnings could be retained.

Two related indices were used to evaluate conservatism-risk strategies in the choice of dice bets. The first strategy, maximization of gain, is the tendency to choose the alternative which promises the larger potential winnings. The second strategy, the long shot, consists of choosing the alternative with the lower probability of winning. An example of a bet which illustrates both strategies is the following:

(A) 1/2 to win 60¢	versus	(B) 1/4 to win 45¢
1/2 to lose 60¢		3/4 to lose 15¢

In this case, alternative B is the long shot and alternative A the bet which maximizes gain. Although these strategies are independent, they were often the same for each bet. They, therefore, constitute related measures of risk-taking tendencies. The degree to which each subject adhered to a risky or conservative strategy was measured by simply summing the number of strategy choices over 16 bets for each administration of the instrument. Owing to difficulties encountered in testing some of the infrequent smokers in the casual user group, a complete set of scores was not obtained for this sample. Therefore, only the results of the heavy users were analyzed.

Means and standard deviations of the two strategy scores are presented in Table XXX. The means indicate that fewer risky bets were chosen during the marihuana period than during the non-smoking phases. Analyses of variance indicate that this tendency is significant statistically for the longshot strategy (F , trials=7.75, p . <.01, F , quadratic trend=5.66, p . <.05) but not for maximization of gain. These results suggest, at least for one type of risk-taking strategy, that heavy users

tend to become more conservative when engaging in decision-making under the influence of cannabis.

Extensive research on the subject of risk-taking by Kogan and Wallach (1964) has shown that certain personality "moderator" variables tend to mediate the relationships between personality factors such as impulsiveness, on the one hand, and risk-taking behavior on the other. It was found that impulsiveness tends to be correlated with risk-taking behavior only for subjects who are low in test anxiety and defensiveness. It is conceivable that marihuana increases the saliency of these variables, thereby inhibiting impulsive tendencies. Or, marihuana may work to inhibit impulsive tendencies directly, perhaps by influencing the individual to consider more the implications of his choices. Although it is unclear at this time exactly why heavy users are less willing to risk their money when they are high, these findings would have important implications if corroborated in further research.

V. Summary

A number of specific questions were posed at the outset of this research. The findings of this study are summarized within this context.

1. *Does repeated use of marihuana systematically affect motivation to engage in a variety of social and goal-directed behaviors?*

Both the casual users and heavy users displayed similar work contingent operant acquisition behavior. The most significant feature of this behavior was that, almost without exception, every subject earned the maximum number of reinforcement points every day during both studies. This finding is in marked contrast to results obtained in alcohol-related research in which alcoholics have periodic, complete cessation of work output when they are consuming alcohol. Subjects in the present study not only earned the maximum reinforcement points throughout the drug period, there also appeared to be no consistent alteration in the pattern of work contingent operant acquisition which could be related to marihuana use. Subjects often performed very high work-output while they were smoking marihuana and when they were experiencing the maximum effects of the drug. Thus, the results disclosed no indications of a relationship between decrease in motivation to work at an operant task and acute or repeat-dose effects of marihuana.

Several other significant findings related to motivation and marihuana smoking observed in

the study should be emphasized. First, all subjects completed this study. This is in marked contrast to similar studies carried out with alcoholic subjects. Alcoholics frequently attempted to terminate participation by overt or covert aggressive behaviors particularly when intoxicated. All subjects in the present study expressed a strong desire to complete the study and rarely tried to impede the research. Subjects, almost without exception, participated in all tests and measurements carried out during the study. Secondly, subjects maintained interest and participation in a variety of personal activities, e.g., writing and reading literature, interest and knowledge of current world events, and participation in both athletics and aesthetic endeavors.

2. *Are there consistent relationships between free-choice marihuana intake and antecedent and consequent mood states?*

Casual users reported a general increase in negative mood states (anxiety, hostility, depression) and a decrease in positive mood states (friendliness, carefreeness) during the course of the study. This trend began with the onset of marihuana smoking and persisted through the post-smoking period. The persistence of this trend during the post-smoking period could be related to variables other than antecedent marihuana smoking. However, it is also possible that the phenomenon was directly related to marihuana use and dysphoria observed during the post-smoking period may represent a sequelae of repeat-dose marihuana smoking.

The acute effects of marihuana for casual users were associated with a reduction of negative effects (anxiety, depression, guilt-shame) and an increase of positive effects (carefreeness and friendliness). Subjects' mood states before smoking were slightly more positive in comparison to average mood during the smoking period. This suggests that casual users tended to smoke marihuana when they reported relatively positive mood states, and the effect of the drug was to increase these positive feelings. This relationship between mood and marihuana smoking has been commonly described in anecdotal literature and by persons who use the drug.

A possible discordant finding in the present research, however, was the apparent trend toward increased dysphoric moods reported by casual users during the course of the study. It is possible that this trend was related to research ward conditions and not marihuana smoking *per se*. However, it is also possible that the trend toward dysphoric moods may have been a compensatory rebound reaction following periodic occurrence of acute

drug-induced euphoria. Support for this latter interpretation is found in a study conducted by Hollister, Richards and Gillespie (1968). These investigators found that one hour after an oral dose of THC subjects' self-ratings of moods showed an elevation of "friendly" and a decrease of "unhappy" feelings, but five hours after the drug was ingested subjects self-rated themselves as being significantly less "friendly" and more "unhappy" than they were prior to the drug.

Results of mood assessments for the heavy users indicate that the acute effects of marihuana smoking were similar to those observed in the casual users in that they reported a slight increase in euphoric moods after smoking marihuana. The heavy users did not show a trend toward dysphoric moods during the course of the study similar to that shown by the casual users. However, the mood states of the heavy users were more negative during the post-smoking period than they were during the pre-smoking and smoking periods. During the post-smoking period heavy users reported an increase in anxiety, hostility, fatigue and a decrease in friendliness and carefreeness. This may reflect some psychological dependence in this group of heavy users; or, alternatively, it may be a function of the boredom and tension associated with the prolonged study period which did not appear in the heavy user group until the end of the smoking phase. In other words, when marihuana was available, this group smoked more marihuana on more occasions than the casual users and the acute effects of the drug (euphoria) may have blocked the emergence of dysphoric mood states.

Although both groups of subjects generally reported positive mood changes after smoking marihuana (e.g., less anxiety and hostility and more friendliness and carefreeness) they also reported feeling *more depressed* at the same time. This paradoxical finding cannot be explained by data available from this study.

3. *What are the relationships between free-choice marihuana intake and patterns of social interaction?*

The present data indicate very strongly that marihuana smoking, in addition to being a subjective drug experience, is also a social activity around which verbal interaction and other types of social behavior are centered. Rarely did subjects choose to smoke alone. Less than 6% of all marihuana consumed by either group was smoked in a place where other subjects were not present. Typically, one or two subjects would actively organize a group smoking session by asking the researcher to initiate distribution and by actively enlisting other subjects into the group.

Although the data indicate that both types of user tended to smoke in groups, the results also suggest that heavy users were more inclined to join their comrades once the smoking occasion had been initiated. This readiness to indulge, but not necessarily to initiate, might indicate that the heavy smokers were more influenced by group pressures than the casual users. In the case of the former, marihuana use is a pivotal activity around which much of their lives revolve. It would seem likely then that the norm for heavy smoking would be stronger for the heavy users, not only because smoking was for them a primary means of reinforcing group solidarity, but also because each heavy user shared expectations of how other heavy users were supposed to act in that type of situation.

Even though marihuana smoking tended to be a group centered activity, subjects did not always engage in verbal interaction while smoking. It was not uncommon to observe some or all of the subjects withdrawing from interaction during the smoking occasion. Heavy users tended to be more withdrawn than the casual users during the smoking occasion, as indicated by their significantly lower frequency of communication. Heavy smokers appeared to be more inclined to seek the personal effects of the drug while the casual users were more inclined to emphasize the social effects. These results are also consistent with results on the Subjective Drug Effects Questionnaire where heavy users reported subjective states that suggested hallucinogenic drug activity.

The most consistent finding, with both casual and heavy users, was the marked initial decrement in total interaction during the first part of the marihuana smoking period. While the heavy users tended to exceed pre-smoking levels of interaction in subsequent sessions, total interaction among casual users continued to diminish. These results suggest that the heavy users accommodated themselves better to the effects of repeated use of marihuana.

Both casual and heavy users performed problem solving tasks more efficiently during sessions when marihuana was available to group members. However, there was also a tendency for suggestions for problem solutions to diminish during the marihuana smoking period. Instead of generating numerous suggestions, considering the merits of each, and then proposing the best one to the experimenter, subjects showed a tendency to adopt the first or second suggestions proposed. While marihuana did not, in general, seem to impair group problem solving efficiency, it may have contributed to a reduction in motivation to participate in a competitive task of this type. Alternatively these results may reflect an attempt to compensate for

deficits in attention which other investigators have reported to be characteristic of the marihuana experience.

An assessment of risk-taking behavior revealed that heavy users tended to become more conservative when engaging in decision-making under the influence of marihuana. Extensive research on the subject of risk-taking behavior has shown that certain personality "moderator" variables tend to mediate the relationships between personality factors such as impulsiveness, on the one hand, and risk-taking behavior on the other. It was found that impulsiveness tends to be correlated with risk-taking behavior only for subjects who are low in test anxiety and defensiveness. It is conceivable that marihuana increases the saliency of these variables, thereby inhibiting impulsive tendencies. Or, marihuana may work to inhibit impulsive tendencies directly, perhaps by influencing the individual to consider more the implications of his choices. Although it is unclear at this time exactly why heavy users are less willing to engage in risk-taking behavior when they are smoking marihuana, these findings may have important implications if corroborated in further research.

4. What are the relationships between free-choice repetitive use of marihuana and performance on psychological tasks which assess functions such as time estimation, memory and psychomotor skills?

Both groups of subjects had a steady improvement in digit-span performance (both forward and backward) during the course of the study. Improvement with practice normally would be expected, and this practice effect indicates that repeated doses of marihuana did not significantly inhibit this ability of subjects to improve their performance through time. The design of the present study did not permit an answer to the question of whether there would have been more of an improvement with practice in the absence of marihuana use.

Despite the overall trend toward improvement in performance, there was a decrease in efficiency of performance by the casual user group during the first quarter of the smoking period. A significant decrement occurred during the first few days of smoking in both groups of subjects. This decrement in performance appears to be related to the acute effects of marihuana smoking. Further indication of an acute impairment associated with marihuana smoking is shown by examination of mean scores for "marihuana-related daily assessments" for both groups of subjects. Efficiency of performance on the digit-span test decreased during these assessments compared with average per-

formance during both non-smoking and smoking periods.

Examination of mean scores for marihuana-related special assessments (assessments that were scheduled to occur within one-half hour after marihuana smoking) also indicate a short-term memory deficit was associated with marihuana smoking in both groups. However, this deficit was not as large as the one occurring during marihuana-related daily assessments when subjects were less aware that performances would be evaluated for acute effects of marihuana smoking. It may be that this awareness increased subjects' motivation for accurate performance during marihuana-related special assessments in order to disprove the view that "marihuana is harmful" (an intention that was explicitly stated by some subjects).

In summary, results of the digit-span test suggest that marihuana smoking had a relatively mild acute effect on short-term memory and no discernible effect on the ability to improve performance with practice.

Results of subjects' performance on the time-estimation test revealed that an acute effect of marihuana smoking is underestimation of time passage (i.e., time appears to pass more slowly). This effect has been reported by other investigators.

Repeated testing on time estimations under normal conditions usually leads to either a stabilization of initial estimates or a trend of estimates toward true time-intervals. However, results in the present study show a tendency for subjects in both groups to increasingly overestimate time passage with repeated testing. The occurrence of a trend toward overestimation of time in the present study may represent a compensatory or rebound reaction to the acute effect of marihuana smoking. That is, it is possible that an effect of chronic marihuana smoking may be overestimation of time passage in contrast to the acute effect of underestimation.

There was a consistent trend toward improved performance on a psychomotor task (shooting gallery) during the course of the study for both groups of subjects. This finding indicates that marihuana smoking did not inhibit subjects' ability to improve with practice. However, the present study was not designed to determine if there would have been more improvement with practice in the absence of marihuana.

The casual and heavy users differed on psychomotor task performance during marihuana-related assessments. The casual users had no decrement in performance during marihuana-related daily

assessments and a slight increase in performance during marihuana-related special assessments (compared to non-marihuana related assessments). The heavy users, on the other hand, have a decrease in performance during both marihuana-related assessments (compared to non-marihuana related assessments). The lack of a decrement in marihuana-related performance for the casual users may be due, in part, to subjects' reports that they tried harder for accuracy during these assessments. Subjects in this group also stated that they found the military connotations of the shooting gallery more humorous and less objectionable when they were under the influence of marihuana.

Acute and repeat-dose effects of marihuana ingestion on cognitive function was studied through serial evaluation of all subjects with a battery of psychological tests known to be sensitive to organic brain function.

No impairment of performance in the tests of cognitive and motor function were observed prior to, during or following marihuana smoking. Two of the individuals in each group performed less well than would have been predicted on the basis of their I.Q. scores and educational backgrounds. Whether this impairment of performance was related to prior drug histories cannot be definitely ascertained.

5. Are there characteristic differences in marihuana smoking patterns between casual and heavy users and are there identifiable parameters related to the different patterns?

Individual consumption by the casual users ranged from an average of less than one a day to 6.2 a day. Mean group consumption data during successive 5-day quarters of the smoking period revealed a definite trend toward increased use of marihuana. There was a 46% increase in use of marihuana during the fourth quarter compared to the first quarter. An examination of consumption patterns for individual subjects showed that the trend toward increased use occurred in those subjects who initially were the heaviest users of the drug in the casual user group. This increase in marihuana use was related to both the number of new initiations of smoking (cigarettes purchased) and the total amount of marihuana actually smoked (cigarettes purchased minus marihuana returned). Subjects in this group who initially were the least frequent users of the drug did not show an increase in use over the course of the study.

A similar trend toward increased marihuana consumption was observed in the heavy user group. There was a 37% increase in smoking in the fourth quarter of the drug period as compared to the first

quarter. Analysis of group data revealed that the heavy users consumed approximately twice as much marihuana as the casual users. Subjects in both groups tended to smoke practically all of each cigarette, but the heavy users were more likely to smoke more than one cigarette in one smoking session.

Global measures of "highness" for the heavy users (with the exception of two subjects) revealed no correlation between "highness" and smoking day. The data suggest that no tolerance to subjective effects occurred as the smoking period progressed for most experienced users. The increased frequency of use over time is, however, consistent with previous observations that the duration of the high in heavy users may be of shorter duration than in less experienced subjects.

6. Are physiological and biochemical changes associated with repeated doses?

No significant abnormalities of urine specific gravity or acidity were found. There was no proteinuria, glycosuria, ketonuria or hematuria. There was no abnormality in blood cell morphology, white blood count or hemoglobin. All subjects had slightly increased monocyte counts, and 8 of the 20 subjects had very slight eosinophilia. There were no significant abnormalities in blood chemistry determinations for calcium, phosphorous, glucose, blood urea nitrogen, uric acid, cholesterol, total protein, albumin, total bilirubin, alkaline phosphatase, lactic dehydrogenase or serum glutamic oxalocetic transaminase.

Nineteen of the twenty subjects gained weight during the study. The maximum weight gain occurred during the marihuana smoking period. The subjects lost weight during the post-smoking baseline period. The mean weight gain during the smoking period for casual users was 7.8 pounds and 10.4 pounds for the heavy users. The mean weight gain during the entire study was 1.3 pounds for the casual users and 4.8 pounds for the heavy users.

Subjects had body temperatures at the low end of the normal range throughout the study with no apparent temperature change related to marihuana smoking.

Twelve of the twenty subjects had some abnormality of pulmonary function at the outset of the study; only three of these twelve subjects were current cigarette smokers, and one had a history of asthma in childhood. It is not known if these abnormalities are related to prior marihuana smoking. No significant change in pulmonary function was observed during the period of marihuana smoking.

Variable blood pressure changes, both increases and decreases, were observed during the period of marihuana smoking; these changes were not considered clinically significant. Pulse rate changes in relation to marihuana smoking were also variable; though an increase in pulse rate was most frequently observed. Occasionally marihuana smoking was associated with either no changes or a decrease in pulse rate. Tachycardia following marihuana smoking was generally more pronounced during the initial phase of the smoking period. This finding suggests that tolerance may occur with respect to marihuana induced changes of cardiac rate.

No significant electrocardiographic changes were observed in any subject during the period of marihuana smoking.

There was no apparent effect of marihuana smoking on exercise-related cardiac vascular function, or upon such function following recovery from exercise. The initial exercise tests carried out during the pre-smoking control period revealed that 7 casual users and 7 heavy users performed in the fair to poor range.

Physical examination findings. All 20 subjects developed conjunctival injections during the marihuana smoking period, which tended to persist following cessation of marihuana use. Four casual and seven heavy users showed conjunctival injection throughout the last examination of the 5th post-smoking day.

19 of the 20 subjects developed nystagmus during the period of marihuana smoking. The nystagmus persisted beyond the period of marihuana smoking. Five casual and six heavy users showed nystagmus as late as the fifth post-smoking day. 16 of the 20 subjects developed fine tremors of the fingers during the period of marihuana smoking. These subjects, plus three other subjects, had tremors following cessation of marihuana smoking. Only one subject did not have tremors at any time during the study. Tremors remitted in all but three subjects on the fifth post-smoking day. There were no significant changes in deep tendon reflexes during the study. It is our impression that the nystagmus and fine tremors probably reflect an acute drug effect and not a persistent neurological abnormality resulting from repeated marihuana use.

An increased amount of total sleep in both shorter and longer blocks of consecutive hours of sleep was observed during marihuana smoking. Associated with this bi-directional shift there also was an increase in number of discrete episodes of sleep (periods of at least one hour of sleep separated by at least one hour of wakefulness) with

the peak number of such episodes consisting of short (one to three hours) segments of sleep. The fragmentation (increased number of discrete episodes of sleep per day) and flattening (bi-directional shift in distribution of episodes) were most likely marihuana induced. This inference is supported by the abrupt appearance of these changes in sleep patterns following the onset of smoking and a tendency toward reappearance of pre-drug sleep patterns during the post-drug period. In summary, the physiological and biochemical data suggest no clear pattern of abnormality secondary to an average of five years of marihuana use or a 21-day period of repeat-dose administration. The pulmonary function findings do suggest the importance of further detailed delineation of marihuana and tobacco cigarette smoking and exposure to air pollutants.

VI. Conclusions

The mandates of Presidential Commissions generally consist of the requirement that definitive statements can be made about subjects of public interest and/or concern. In contrast, scientific research (particularly in the behavioral sciences) generally results in the generation of a new (albeit more sophisticated) range of questions rather than definitive answers. In the case of a subject as controversial and complex as marihuana, the public's demand for some definition of risk cannot be met by the findings of a single research study (due to limitations related to subject selection). Risk can be best defined by comparing data obtained on individuals with widely differing use patterns and by assessing physical and mental functioning in a variety of settings as reported by a number of research scientists and clinicians.

The assessments of psychomotor performance, acute and subacute physiological effects, and operant work output in the present study are similar to assessments made in studies of alcohol-intoxicated individuals and/or in other experimental work with human subjects. While the research design obviously did not permit direct comparisons of intoxication (alcohol vs. marihuana) in the same individuals, interesting differences did emerge when one compared the acute and repeat dose effects of marihuana in persons who normally use it every day ("heavy users") with these effects of alcohol in problem drinkers. In this particular study, "heavy marihuana users" were persons with a 2-9 year history (mean, 5 years) of smoking and daily usage during the last 12 months. Does this constitute a "problem marihuana user?"

McGlothlin (1971) has observed that the daily intake of tetrahydrocannabinol among heavy hashish smokers may be 10 times the daily dose of the average American marihuana user. The latter may smoke 1-2 "joints" per day (average weight 0.5 grams; average THC content less than 1%) and accumulate a maximum daily dose of 10-15 mg. It is of significant interest, therefore, that some of the "heavy users" in the present study smoked as many as 10 one-gram cigarettes per day (mean THC content 2%); and apparently accumulated a maximal daily dose of 200 mg. without significant ill effect. They did not become psychotic although lower doses of THC have caused hallucinatory states in acute administration studies (Isbell, et al., 1967; Hollister, et al., 1970). The data suggest that subjects who self-administered such high doses were tolerant to many of the hallucinogenic effects of the drug. The only subjective report suggesting hallucinogenic effects was the high "ambivalence" score on the Subjective Drug Effects Questionnaire; but from reports in the literature one would have expected a more dramatic response to such a high daily dose of THC. The absence of such dramatic effects was best illustrated by one subject (5H) who smoked 20 one-gram cigarettes on the last day of the study, including 10 during the final 6 hours of this 24-hour period. Two hours after smoking his last "joint" his performance on tests of recent memory, time estimation and the shooting gallery, were within his normal range, and his general behavior disclosed no discernible effects from having ingested such a massive dose of THC.

It appears that users of American marihuana under conditions of ready availability and little alternative recreation (the conditions of this study) will self-administer doses of THC that had been thought to be atypical for our culture. The apparently rapid build-up of tolerance (a characteristic of hallucinogenic drugs which occurs under conditions of daily usage) permitted the daily administration of a large concentration of THC. The absence of disruptive psychological, behavioral or physiological effects does not mean that these doses are not potentially harmful. In the non-tolerant individual they would likely result in an hallucinogenic state. The medical question that one must ask is what the effects of long term daily self-administration of high doses of tetrahydrocannabinol would be upon physical and mental functioning. The American experience is not extensive enough to suggest a probable outcome in such individuals. It will be necessary to follow the smoking patterns of heavy users over many years in this country in order to determine whether they

develop patterns of high dose cannabis intake analogous to the patterns of alcohol intake of our alcoholics (and identical to the patterns of hashish administration in the Middle East and North Africa). In the repeat-dose study reported here, subjects did not alter their daily pattern of activities, nor did they demonstrate impaired performance related to repeated high-dose self-administration.

The reader may ask whether the pattern of smoking which developed on the research ward is in fact the "real-life" pattern, i.e., "was the questionnaire data gathered prior to the study a gross underestimation of the usual intake by these subjects?" This is a legitimate question for which we can offer no definitive answer. Nevertheless, subjects could gain no advantage for understating marihuana use on the questionnaire since they had no information whatsoever relating to the criteria used for subject selection in regard to past marihuana use. In addition, all subjects reaffirmed the accuracy of their answers on the drug-use questionnaire during interviews held on the last nights of both studies (i.e., at a time when subjects had nothing to gain or lose by being truthful). There was no singular reason for the high frequency of marihuana use during the study compared to subjects usual patterns of use. A few subjects said they smoked more during the study to test the limits of their own endurance while in a safe environment (i.e., they were conducting personal studies of their own). Other subjects said they themselves were so convinced of the harmlessness of the drug that they smoked large quantities to demonstrate this harmlessness to the research staff. Still other subjects said their increased smoking was related to the restrictions of the research ward (i.e., "there was little else to do"). From the results relating to smoking and social interaction, it is likely that the increased smoking by some subjects (motivated by a need to "prove" something either to themselves or the research staff) served as a stimulus for increased smoking by other subjects.

The question of tolerance has been described previously. Tolerance to drug effects occurs over time with a variety of pharmacologic agents, not all of which are drugs of abuse. Tolerance to the effects of THC in the pigeon had been described by McMillan, et al. (1970). Tolerance to the physiological and psychomotor effects of THC in man can only be verified by the administration of fixed doses over time; or by the administration of a dose of THC just prior to an extended smoking period and at the end of the smoking period. Nevertheless, the results of the present study suggest strongly that there is tolerance to the cardio-

vascular (pulse rate) effects, as well as to psychological effects, including sedation, impair recent memory, time estimation, and psychomotor coordination. The absence of active hallucinatory states associated with daily doses of 200 mg. THC/day suggests tolerance also to the hallucinogenic effects of this drug. Moreover, the tendency of subjects to increase their daily intake by shortening the interval between "joints" suggests that the duration of the high is reduced with frequent use. Confirmatory studies using fixed doses of tetrahydrocannabinol with careful monitoring of metabolic turnover (as well as specific effects upon biogenic amines and steroid metabolism) are essential to clarify the nature of this phenomenon.

Throughout the study, a number of physiological and biochemical parameters were monitored including weight, pulse rate, blood pressure, respiratory rate, vital capacity and one-second timed vital capacity, EKG, complete blood count, urinalysis, and standard serum analysis of BUN, blood sugar and various liver function tests. In addition, subjects underwent repeated physical examinations throughout the study period. Of interest was an apparently diminished vital capacity in both groups of users which was present prior to their smoking marihuana during the experiment. These data suggest that chronic marihuana use may impose some risk of chronic lung disease; but large-scale population surveys with a variety of pulmonary function studies are essential to any definition of risk. Such studies must include detailed smoking, occupational and residential histories in order to sort out the specific effects of marihuana smoking from the problems of air pollution and tobacco smoking. The absence of effects of marihuana smoking over 21 days on vital capacity and timed vital capacity imply that smoking involved no acute or subacute impairment of respiratory function.

The presence of lateral nystagmus and hand tremor associated with marihuana smoking merely confirms that this substance is causing non-specific acute effects within the central nervous system (a characteristic of most centrally active drugs). The persistence of some of these findings beyond the smoking period warrants further investigations which must include some estimate of the persistence of THC and its metabolites in tissues. In the absence of a measure of duration of metabolic activity, it is impossible to assess the significance of this finding. The recent report in *Lancet* (Campbell, et al., 1971) suggests that further studies of neurologic function in heavy users of marihuana are in order.

The effects of marihuana upon group and individual behavior failed to confirm the reports of those who most strongly advocate for or against its use. While both groups of smokers preferred to smoke in groups, there was no observable facilitation of social interaction and subjects tended not to evidence more aggressive behavior while "high" as when "straight."

In general it appeared, on the basis of past history and ward behavior, that recruitment into a pattern of marihuana smoking was not a function of some aberrant personality pattern, but was rather a function of group norms. This was dramatically demonstrated in the casual user group where the two lightest smokers on the ward had been roommates on the outside and their precious relationship apparently shielded them from any subtle or overt group pressures to engage in heavier smoking. Similarly the heaviest smokers tended to recruit each other into smoking activity, with isolated smoking being an unusual occurrence.

The problems of subject selection have been described in the early sections of this report. The conditions of the research design, involving a prolonged period of hospitalization without outside contact precluded the selection of subjects who were married and/or involved in full-time work or school. Moreover, the delay in finalizing contractual arrangements precluded the recruitment of students on summer holiday. Thus, the sample was skewed markedly in the direction of unemployed, unmarried young men who are somewhat atypical relative to their peers. Survey data has indicated (King, 1969; Manheimer, et al., 1969) that there are many young persons who are involved in fulltime work or school who have used marihuana. Previous work by one of the authors of the present report (Meyer et al., 1971; Mirin, et al., 1971) has confirmed the absence of specific or severe psychopathology in casual users of marihuana, while heavier users of this substance (in the earlier study) tended to suffer from some interpersonal problem. As defined in traditional psychiatric terms, the latter group appeared to have some adaptive problems, but it was not clear that these resulted from marihuana smoking. Many readers may wonder about the apparent "under achievement" suggested by the work histories in both groups of users in the present study. It is not possible to attribute or refute an etiological role of marihuana use in the etiology of this adjustment based on the information obtained in this experiment. The data obtained (and described above) in the smoking phase of this study indicated that acute and repeat dose marihuana ad-

administration did not alter the recreational, physical and operant work patterns of these two groups of subjects. Motivation is obviously a complex phenomenon related to early life experiences, peer and adult approval and stability of identity and role models. Thus, even in studies of chronic, long-term, heavy use of marihuana it will be difficult to attribute motivational change to any specific agent. Of special interest in this study is that, contrary to alcohol, marihuana intoxication (acute and over period of 3 weeks) did not noticeably affect the motivational patterns of any subject. (One casual user subject returned to his old job at the end of

the study after being voluntarily unemployed for 18 months.) Chronic, habitual alcohol use does result in job loss and deterioration of self-care. In the paradigm of this experiment, alcohol intoxication reduces work output to zero (as in "real-life"). In contrast, marihuana intoxication did not have this effect on our subjects and may, therefore, not have a direct effect on motivation in "Real-Life." This does not mean that heavy use is not a factor in "dropping out" by some of the young. It does mean that the phenomenon is probably more complex than can be explained by acute and repeat dose administration of marihuana.

Table 1A Personal Data Casual Users

<u>Subject Number</u>	<u>Age</u>	<u>I.Q. (wais)</u>	<u>Years of College</u>	<u>Usual Employment</u>	<u>No. of Jobs in Past Three Years</u>	<u>Longest Period on 1 Job</u>	<u>Military Status</u>
1	28	139	4	Odd jobs	3	1 day	1-Y (Letter from Psychiatrist)
2	22	121	3	Newspaper writer	3	4 months	2-S deferment
3*	31	112	0	Actor, Postal employee	4	4 years	Refused induction
4	21	125	1-1/2	Lab Assistant	5	6 months	Has not been drafted
5	22	118	3	Newspaper layout	4	4 months	2-S deferment
6	27	120	4 (grad)	Financial analyst	1	1-1/2 years	Army-2 years (1966-1968) Sergeant, Honorable Discharge
7	24	127	4	Carpenter's appren.	3	1 year	2-S deferment
8	21	113	1	Taxi Driver	7	3 months	1-Y (Letter from Psychiatrist)
9	21	119	1	Newspaper hawker	5	3 months	Has not been drafted
10	23	128	4 (grad)	Office work (Pub. Co.)	4	3 months	2-S deferment
—	—	—	—	—	—	—	—
\bar{X}	24	122.2	2.55		3.9	10.4	
SD	3.50	7.96	1.54		1.59	14.12	

*Subject number 3 was the only Black subject in the study.

Table 1B Personal Data Heavy Users

Subject Number	Age	I.Q. (wais)	Years of College	Usual Employment	No. of Jobs in Past Three Years	Longest Period on One Job	Military Status
1	23	118	4	Housepainter Student	1	4 yrs, Part-time	1-Y (Psychiatric letter)
2	22	130	4 (grad)	Parking lot att. writer	3	13 months	1-Y (Psychiatric letter)
3	22	117	2	Factory worker carpenter	6	1 year	Refused induction
4	23	120	4 (grad)	Radio Announcer	5	6 months	Conscientious objector
5	22	111	1/2	Auditing clerk	4	1 1/2 years	Served in Army 2 years Honorable Discharge
6	22	110	0	Garment factory worker	2	11 months	1-Y
7	21	111	0	Truck Driver	3	2 1/2 years	1-Y
8	23	108	4	Musician	4	2 years	Served in Army 2 years Honorable Discharge
9	21	121	1 1/2	Shoe-salesman Flagpole installer	5	2 years	Exempt by lottery number
10	21	128	3	Park Ranger Student	2	3 months	2-S deferment
\bar{x}	22	117.4	2.3		3.5	18.9 months	
SD.	.82	7.6	1.72		1.58	13.28	

Table IIA Family History Casual Users

Subject Number	Family Socio-Economic Status	Religious Background	Parents' Marital Status	No. of Siblings	Position of Subj. in Siblingship	Problem Substance Use
1	II	Jewish	Married	0	-	0
2	I	Catholic	Married	1Br; 1Si	Youngest	0
3	IV	Protestant (Episcopalian)	Married	4Si	Second Youngest	GF-Alcoholic, 2SI-M
4	II	Catholic	Married	1Si	Oldest	0
5	II	Catholic	Married	4Br; 1Si	Second Oldest	2Br-M
6	II	Catholic	Mo. died when subj. 14 years old	3Br; 2Si 3 Stepbros. Youngest	Youngest	Fa-Alcoholic
7	II	Catholic	Married	2Si	Oldest	0
8	II	Protestant	Married	1Br	Youngest	0
9	II	Catholic	Married	4Br; 1Si	Second Oldest	Br(22)-M
10	III	Catholic	Married	1Br	Youngest	Br(25)-M,H
I: 1		1 Jewish	All Married	2.6 ¹ .95	4 youngest	
II: 7		7 Catholic		not counting	1 2nd youngest	
III: 1		2 Protestant		stepbr.	2 2nd oldest	
IV: 1					2 oldest	
					1 only child	

Abbreviations:

Fa = Father

Mo = Mother

Br = Brother

Si = Sister

GF = Grandfather

M = Marijuana

H = Hallucinogens

(Number in parentheses) = age of sibling

Table IIB Family History Heavy Users

Subject Number	Family Socio-Economic Status	Religious Background	Parents' Marital Status	No. of Siblings	Position of Subject in Siblingship	Problem Substance Use
1	III	Protestant (Baptist)	Divorced when subj. 12 yrs. old	2Br; 2Si	Sec. Oldest	Fa-Alcoholic, Br(21)M
2	III	Jewish	Married	2Si	Middle	Si(23)M,H, Si(16)M
3	IV	Mormon	Divorced when subj. 10 yrs. old	1Br, 1Si	Youngest	0
4	III	Catholic	Married	2Br, 3 Si	Sec. Youngest	Br(30)+Si(28, 25) M,H Br(18)+Si(27) M
5	III	Gk. Orthodox	Married	2Br	Middle	Br(24)M, H, Br(17)M
6	IV	Catholic	Divorced when subj. 10 yrs. old	2Br; 1Si	Sec. Oldest	2Un-Alcoholic Br(21, 16)M
7	V	Protestant (Methodist)	Married	1Si	Oldest	Si(16) M, B
8	II	Jewish	Married	0	-	-
9	III	Catholic	Separated when subj. 18 yrs. old	3Br; 5Si	Sec. Oldest	Fa-Alcoholic, Si(19, 17 15, 14)M, Br(18, 12) M
10	IV	Catholic	Married	1Br; 1Si	Middle	Mo, Fa-Heavy Alcoholic Br(17)M
	I: 0 II: 1 III: 5 IV: 3 V: 1	2 Jewish 4 Catholic 1 Gk. Orthodox 2 Protestant 1 Mormon	4 Div. or Sep. 6 Married	No. Sib. = 2. 9+ 2. 28	1 youngest 1 2nd youngest 3 middle 3 2nd oldest 1 oldest 1 only child	

Abbreviations:

Fa = Father
 Mo = Mother
 Br = Brother
 Si = Sister
 Un = Uncle

M = Marihuana
 B = Barbiturates
 H = Hallucinogens
 Number in parentheses = age of sibling

Table IIIA Substance Use Casual Users

Subject Number	ALCOHOL		HALLUCINOGENS		AMPHETAMINES		Other Drug Use
	Age First Used	Subsequent Use	Age First Used	Subsequent Use	Age First Used	Subsequent Use	
1	21	Rare - Light	25	< 10 times	-	-	-
2	14	Rare - Light	19	< 10	20	< 10	-
3	12	Occasional - Light	28	< 10	-	-	Cocaine 3x
4	16	Rare - Light	18	> 50	19	< 10	Barbiturates 2 - 3 times
5	16	Rare - Light	20	< 10	20	< 10	-
6	21	Occasional - Light	24	< 10	-	-	-
7	16	Occasional - Light	21	< 10	20	< 10	Smoked opium 1x
8	16	Rare - Light	18	> 50	18	> 10	Cocaine 1x; Barbiturates 2-3times
9	13	Rare - Light	19	> 10	20	< 10	Shorted heroin 1x Cocaine 2-3times
10	21	Occasional - Light	21	> 10	21	< 10	-
11	16.6	Rare - Light: 6	21.3	< 10: 6 > 10: 2	19.71	0: 3 < 10: 6	
12	3.34	Occasional - Light: 4	3.33	> 50: 2	.95	> 10: 1	

Table IIIB Substance Use Heavy Users

Subject Number	ALCOHOL		HALLUCINOGENS		AMPHETAMINES		Other Drug Use
	Age First Used	Subsequent Use	Age First Used	Subsequent Use	Age First Used	Subsequent Use	
1	16	Frequent - Moderate	20	>100 times	20	> 50	Cocaine 1-2x
2	17	Rare - Light	18	> 10	19	> 10	Cocaine 2x; Barbiturates 3x
3	15	Rare - Light	18	>50	17	> 10	Cocaine 2x
4	16	Rare - Light	?	< 10	?	> 10	Barbiturates 1x
5	14	Rare - Light	21	> 10	-	-	-
6	14	Occasional - Moderate	18	>50	-	-	Cocaine 4x; Barbiturates 6x; Heroin 1.v.(3 bags per day for 8 mos) No heroin for past 13 months
7	16	Rare - Light	18	> 100	18	> 100	Cocaine 2x
8	15	Rare - Light	16	> 100	21	> 25	-
9	15	Rare - Light	18	> 10	?	1	Cocaine 5x; Barbiturates 4x; Snorted heroin 1x
10	15	Rare - Light	19	> 10	?	2-3x's	Smoked opium(pipe) 2x
\bar{x}	15.3	Rare - Light: 8	18.44	< 10: 1 > 10: 4	19.0	0: 2 < 10: 2	
SD	.95	Freq. - moder.: 1 Occ. - moder.: 1	1.42	> 50: 2 > 100: 3	1.58	> 10: 3 > 25: 1 > 50: 1 > 100: 1	

Table IVA Marihuana Use Casual Users

Subject Number	Age First Used	Reaction to First Use	Total Years Of Use	Current Smoking Sessions (no./mo.)	USUAL AFFECTIVE Response to Smoking Marihuana		When Last Smoked	Reaction to Last Smoking Session
					Euphoria	Anxiety		
1	22	Mildly pleasant	6	5	E	R	↑	5 days Mildly Pleasant
2	16	Extremely pleasant	6	5	E	0	↑	1 day Extremely Pleasant
3	14	Mildly pleasant	17	15	0	R	0	7 days Extremely Pleasant
4	18	Neutral	3	5	0	0	↑+↓	1 day Mildly Pleasant
5	18	Mildly unpleasant	4	5	E & D	0	↑	1 day Mildly Unpleasant
6	22	Extremely pleasant	5	12	E	0	↑	5 days Mildly Pleasant
7	21	Mildly pleasant	3	3	E	0	↓	7 days Extremely Pleasant
8	18	Extremely pleasant	3	10	E	0	↓+↑	1 day Mildly Pleasant
9	17	Neutral	4	10	0	R	↓	1 day Mildly Pleasant
10	19	Extremely pleasant	4	7	E	A	↓	10 days Neutral
\bar{x}	18.5	Mildly pleasant: 3 Extrem. pleasant: 4	5.5	7.7	Euphoria vs Dysphoria	Relaxation vs Anxiety	Percept. Increase Decrease	Mildly Pleasant: 5 Extremely Pleasant: 3 Mildly unpleasant: 1 Neutral: 1
SD	2.59	Neutral: 2 Mildly unpleasant: 1	4.20	3.86	E: 6 D: 0 O: 3 E&D: 1	E: 3 O: 6 A: 1	↑: 4 ↓: 3 0: 1 ↑+↓: 2	

Table IVB Marihuana Use Heavy Users

Subject Number	Age First Used	Reaction to First Use	Total Years of Use	Current Smoking Sessions (no./mo.)	USUAL AFFECTIVE Response to Smoking Marihuana		When Last Smoked	Reaction to Last Smoking Session
					Euphoria	Anxiety		
1	19	Mildly pleasant	4	30	E	R	↑	1 day Extremely pleasant
2	18	Neutral	4	25	O	R	↑	2 days Mildly pleasant
3	17	Mildly pleasant	5	50	E	R	↑	3 days Mildly pleasant
4	18	Neutral	5	30	E	R	O	3 days Mildly pleasant
5	17	Extremely pleasant	5	75	E	R	O	0 days Extremely pleasant
6	17	Mildly pleasant	5	10	E	R	↑ + ↓	5 days Extremely pleasant
7	17	Mildly pleasant	4	40	O	R	↑ + ↓	3 days Extremely pleasant
8	12	Mildly pleasant	9	25	E	R	↑ + ↓	0 days Extremely pleasant
9	16	Neutral	5	25	E	R	↑	0 days Extremely pleasant
10	19	Mildly pleasant	2	20	O	-	↑	0 days Extremely pleasant
E	17.0	Mildly pleasant: 6 Extremely pleas.: 1 Neutral: 3	4.8	33.0	Euphoria vs Dysphoria E: 7 D: 0 -: 3	Relaxation vs Anxiety R: 9 -: 1	Percept. Increase vs Decrease ↑: 5 ↑↓: 3 -: 2	1.7 1.77
SD	2		1.75	18.29				Mildly pleasant 3 Extremely pleasant 7 Mildly unpleasant 0 Neutral: 0

Table V

Family and Subject SES.

<u>Number</u>	<u>Parent SES.</u>	<u>Subject SES.</u>	<u>Number</u>	<u>Parent SES.</u>	<u>Subject SES.</u>
1	II	V	1	III	IV
2	I	III	2	III	III
3	IV	III	3	IV	IV
4	II	III	4	III	III
5	II	III	5	III	III
6	II	II	6	IV	IV
7	II	IV	7	V	IV
8	II	IV	8	II	III
9	II	V	9	III	III
10	III	III	10	IV	IV

TABLE VI
PERCENT DISTRIBUTION OF DAILY OPERANT WORK OUT-PUT

CASUAL USERS	AM		PM		AM		AM		4-8		
	8-10	10-12	12-2	2-4	4-6	6-8	8-10	10-12		12-2	2-4
Pre-Drug	.17	.16	.18	.17	.13	.11	.05	.01	-	-	-
1st 5 days	.13	.17	.17	.14	.15	.14	.07	.02	-	-	-
2nd 5 days	.12	.15	.15	.12	.13	.13	.11	.07	-	-	-
3rd 5 days	.14	.16	.12	.15	.15	.11	.07	.07	.03	-	-
Last 6 days	.12	.15	.12	.14	.14	.13	.09	.08	.03	.01	-
Post-Drug	.11	.16	.16	.16	.12	.13	.09	.06	.01	.01	-
HEAVY USERS											
Pre-Drug	.14	.12	.13	.15	.22	.11	.06	.03	-	-	-
1st 5 days	.14	.17	.18	.16	.13	.08	.05	.05	.03	.01	-
2nd 5 days	.18	.16	.16	.16	.18	.08	.05	.02	.01	-	-
3rd 5 days	.12	.15	.15	.15	.13	.14	.09	.05	.02	.01	-
Last 6 days	.08	.14	.15	.14	.13	.16	.09	.05	.02	.03	.01
Post-Drug	.04	.14	.15	.17	.17	.15	.11	.05	.02	.01	-

Table X

Casual Users - Smoking related physiological
Data: Means \pm SD

	1C	2C	3C	4C	5C
		only 1 day			Only 1 day
S BP SIT	110.12 \pm 5.86	144	120.0 \pm 8.06	112.0 \pm 5.66	142
D BP SIT	69.0 \pm 5.51	72	76.0 \pm 3.27	70.0 \pm 6.78	90
S BP STND	110.75 \pm 9.09	160	120.6 \pm 7.06	114.8 \pm 5.76	134
D BP STND	69.63 \pm 5.29	76	75.6 \pm 7.17	76.8 \pm 5.22	96
PR SIT	83.5 \pm 12.12	88	88.0 \pm 7.30	86.4 \pm 10.04	116
PR STND	91.88 \pm 11.47	100	98.8 \pm 12.19	100.8 \pm 12.13	124
FEV	3.58 \pm .13	4.9	4.29 \pm .21	4.77 \pm .25	4.1
FEV'	3.31 \pm .08	2.7	3.41 \pm .11	3.23 \pm .40	3.7
	6C	7C	8C	9C	10C
				Only two days	
S BP SIT	104.0 \pm 10.95	113.67 \pm 8.43	102.07 \pm 6.89	129.0 \pm 15.56	112.67 \pm 5.77
D BP SIT	67.8 \pm 11.37	79.0 \pm 5.76	70.0 \pm 6.93	89.0 \pm 12.73	76.67 \pm 5.77
S BP STND	91.6 \pm 12.99	107.67 \pm 10.07	95.57 \pm 7.85	130.5 \pm 21.92	109.67 \pm 13.05
D BP STND	68.6 \pm 9.0	78.67 \pm 3.93	63.5 \pm 7.79	75.0 \pm 35.36	78.67 \pm 9.02
PR SIT	95.6 \pm 14.17	91.33 \pm 10.86	87.0 \pm 18.87	92.0 \pm 11.31	100.67 \pm 7.02
PR STND	108.4 \pm 17.33	104.67 \pm 12.24	95.14 \pm 16.32	98.0 \pm 19.80	109.33 \pm 10.07
FEV	3.68 \pm .26	4.23 \pm .31	3.86 \pm .15	5.8	} = only one day
FEV'	3.68 \pm .26	4.07 \pm .15	3.54 \pm .15	4.5	

Table XI

Heavy Users - Marijuana related physiological
Data: Means \pm SD

	1H	2H	3H	4H	5H
S.BP-SIT	113.33 \pm 6.93	113.43 \pm 9.22	122.0 \pm 8.53	120.47 \pm 9.42	127.45 \pm 11.25
D.BP-SIT	60.67 \pm 5.83	68.57 \pm 4.86	68.33 \pm 7.62	67.06 \pm 6.79	76.73 \pm 8.26
S.BP-STND	113.11 \pm 8.07	111.43 \pm 7.63	115.67 \pm 4.58	116.0 \pm 8.09	124.73 \pm 11.29
D.BP-STND	72.89 \pm 10.54	66.0 \pm 6.32	71.27 \pm 7.76	69.12 \pm 7.30	78.36 \pm 4.27
PR SIT	84.44 \pm 13.03	90.86 \pm 7.90	91.83 \pm 11.99	90.82 \pm 11.81	87.45 \pm 13.86
PR STND	98.67 \pm 14.83	100.57 \pm 9.07	104.0 \pm 13.74	98.59 \pm 10.95	100.0 \pm 17.16
FEV	4.18 \pm .08	4.09 \pm .16	6.67 \pm .21	3.46 \pm .16	4.41 \pm .11
FEV'	4.05 \pm .08	3.26 \pm .36	5.0 \pm .25	3.32 \pm .17	3.9 \pm .22
	6H	7H	8H	9H	10H
S BP SIT	113.33 \pm 7.35	119.43 \pm 7.66	109.0 \pm 2.89	116.18 \pm 7.67	120.0 \pm 8.26
D BP SIT	69.78 \pm 8.09	71.86 \pm 8.21	64.33 \pm 9.34	77.82 \pm 5.69	72.0 \pm 7.48
S BP STND	108.0 \pm 6.86	115.14 \pm 7.39	103.0 \pm 6.30	116.55 \pm 10.40	117.38 \pm 9.65
D BP STND	72.44 \pm 9.37	70.14 \pm 10.48	68.5 \pm 10.31	80.91 \pm 11.08	72.38 \pm 7.35
PR SIT	74.22 \pm 6.67	92.29 \pm 5.76	70.5 \pm 12.42	94.55 \pm 9.17	98.13 \pm 16.12
PR STND	88.44 \pm 9.26	104.29 \pm 5.76	103.67 \pm 15.20	104.0 \pm 9.80	110.56 \pm 11.84
FEV	4.83 \pm .29	5.16 \pm .19	4.24 \pm .34	4.0 \pm .20	4.49 \pm .20
FEV'	3.9 \pm .21	3.91 \pm .11	2.85 \pm .29	2.99 \pm .23	3.96 \pm .17

Table XII A

Results of Cardiac - Exercise Test for Casual Users:
Pulse rate return to normal*

Study Day	4	11	18	25	30
Subject No.	Control	Smoking	Smoking	Smoking	Control
1c	x	x	x	x	x
2c	3	4	3	1	3
3c(T)	x	x	x	x	x
4c	4	4	3*	4*	4
5c	4	4	4	3	4
6c	5	5	5	3	5
7c	2	5	3	3	4
8c(T)	4	3*	4*	4	3
9c(T)	4	4	4	4	3
10c (T)	2	4	4	4	4

* 1 = excellent
 2 = very good
 3 = good
 4 = fair
 5 = poor
 x = no test

Table XII B

Results of Cardiac - Exercise Test for Heavy Users:
Pulse rate return to normal*

Study Day	4	11	18	25	30
Subject No.	Control	Smoking	Smoking	Smoking	Control
1H	4	4*	2	2*	2
2H	4	3	2	3	1
3H(T)	x	5*	5*	5*	4
4H	3	5*	4*	4*	4
5H(T)	5	5	5*	5*	4
6H(T)	3	3	3	2*	1
7H(T)	4	5*	5*	4*	4
8H(T)	3	4*	2	4*	3
9H(T)	4	5*	4	5*	1
10H	5	5*	5	5*	5

* 1 = excellent
 2 = very good
 3 = good
 4 = fair
 5 = poor
 x = no test

Table XIII

**HOURS OF SLEEP PER DAY:
Means and Ranges ()**

Casual Users	Pre-Drug 5-days	<u>Marihuana Smoking Period Quarters</u>				Post-Drug 5-days
		1st 5-days	2nd 5-days	3rd 5-days	4th 6-days	
1c	6.0(5-7)	10.8(8-12)	8.4(7-10)	9.2(7-11)	10.3(9-13)	6.2(1-10)
2c	8.2(6-10)	9.8(7-12)	9.8(9-12)	8.6(7-10)	9.2(8-10)	9.8(9-11)
3c	7.5(7-9)	9.4(7-14)	8.6(5-11)	8.4(6-10)	8.2(8-9)	9.4(8-10)
4c	7.5(6-8)	8.4(6-12)	9.4(8-11)	8.0(7-12)	9.7(8-11)	10.6(9-12)
5c	7.2(6-8)	10.2(9-13)	10.6(8-13)	8.4(7-12)	9.5(7-11)	8.8(7-11)
6c	6.2(5-7)	7.8(7-10)	9.8(8-13)	8.2(7-9)	8.8(7-10)	8.2(6-10)
7c	6.7(6-8)	8.6(6-11)	8.2(6-11)	7.8(6-9)	8.7(7-10)	8.2(7-10)
8c	6.7(6-8)	8.2(7-10)	7.4(6-9)	7.6(6-12)	7.0(4-10)	4.4(2-10)
9c	7.2(6-9)	8.4(6-11)	9.2(7-11)	8.2(7-10)	9.0(8-11)	8.6(6-11)
10c	6.2(6-7)	7.0(5-8)	7.8(7-9)	7.0(5-10)	8.2(7-9)	8.2(6-10)
Group \bar{x}	7.0	8.9	8.9	8.1	8.9	8.2
<hr/>						
Heavy Users						
1h	5.8(5-7)	7.0(5-11)	7.4(6-9)	7.0(6-8)	8.11(6-13)	7.0(5-10)
2h	7.6(7-9)	9.0(6-12)	8.6(6-10)	9.8(8-12)	9.17(7-11)	10.6(8-12)
3h	8.0(7-9)	9.6(7-12)	8.6(8-10)	10.0(8-13)	9.0(7-11)	7.6(5-11)
4h	8.0(6-10)	8.4(8-10)	7.6(6-9)	7.8(6-10)	7.67(4-10)	7.8(6-10)
5h	8.6(7-10)	8.6(6-10)	8.0(6-10)	9.0(8-10)	8.0(5-10)	7.0(6-8)
6h	6.75(4-8)	8.2(7-12)	8.2(5-11)	8.4(7-10)	8.0(7-10)	6.0(5-7)
7h	8.2(7-9)	8.8(6-12)	8.0(5-10)	8.2(5-13)	7.5(3-9)	7.4(5-9)
8h	6.0(4-9)	7.6(6-10)	5.2(5-7)	6.2(5-8)	6.5(3-12)	4.6(2-6)
9h	8.4(6-11)	9.4(8-11)	8.0(5-11)	7.4(4-10)	10.17(8-13)	6.6(3-11)
10h	8.2(7-10)	10.6(8-14)	10.2(8-12)	10.2(9-13)	10.33(8-15)	8.8(6-11)
Group \bar{x}	7.5	8.7	8.0	8.4	8.4	7.3

TABLE XIV

NUMBER OF DISCRETE EPISODES OF SLEEP: TOTAL NUMBERS

Casual Users Consecutive Hours	Marihuana Smoking Period Quarters					
	Pre-Drug 5-days	1st 5-days	2nd 5-days	3rd 5-days	4th 6-days	Post-Drug 5-days
1	12	33	11	8	21	19
2		13	8	6	10	11
3		1	7	1	7	9
4		3		4	4	1
5	2	2	1	2	2	2
6	25	11	7	6	6	8
7	15	19	11	17	12	9
8	6	8	15	14	18	17
9	1		11	6	7	7
10		4	5	4	1	2
11		3				
12		2				

Heavy Users

Consecutive Hours						
1	9	22	6	6	10	16
2	2	5	2	1	16	15
3		5	2	5	6	1
4	4	4	1	8	3	3
5	4	11	7	2	7	6
6	8	5	5	8	8	19
7	8	10	8	7	10	5
8	12	13	12	9	16	7
9	13	4	10	9	1	5
10		2	5	8	1	2
11	1	3	1		1	
12		2	1	2	2	

TABLE XV

DISTRIBUTION OF CONSECUTIVE HOURS OF SLEEP: Percentage of total sleep

Casual Users Consecutive Hours	Marihuana Smoking Period Quarters					Post-Drug 5-days
	Pre-Drug	1st	2nd	3rd	4th	
	5-days	5-days	5-days	5-days	6-days	
1	.04	.07	.02	.02	.05	.05
2	0	.06	.04	.03	.04	.05
3	0	.01	.05	.01	.04	.07
4	0	.03	0	.04	.04	.01
5	.04	.02	.01	.02	.03	.02
6	.43	.15	.09	.09	.08	.12
7	.30	.30	.17	.28	.20	.15
8	.14	.15	.27	.27	.33	.33
9	.03	0	.22	.13	.15	.15
10	0	.09	.11	.10	.04	.04
11	0	.07	0	0	0	0
12	0	.05	0	0	0	0
Heavy Users						
Consecutive Hours						
1	.02	.05	.01	.01	.02	.04
2	.01	.02	.01	.01	.07	.08
3	0	.03	.01	.04	.04	.01
4	.04	.04	.01	.08	.03	.03
5	.05	.13	.09	.02	.09	.08
6	.13	.07	.07	.11	.12	.31
7	.15	.16	.14	.12	.16	.09
8	.25	.24	.24	.17	.30	.15
9	.31	.08	.22	.19	.03	.12
10	0	.05	.12	.19	.02	.05
11	.03	.08	.03	0	.02	0
12	0	.06	.03	.06	.07	0

TABLE VII

MEAN DAILY NUMBER OF MARIHUANA CIGARETTES STARTED (1 cig. = 1 g),
AND MEAN DAILY AMOUNT OF MARIHUANA RETURNED UNSMOKED () IN GRAMS.

Casual Users	Smoking Period				Last (21st day) of Smoking	First 20 Days of Smoking
	1st 5-Days	2nd 5-Days	3rd 5-Days	4th 5-Days		
1C	4.8 (0.20)	6.8 (0.58)	5.8 (0.34)	7.6 (0.65)	13 (1.28)	6.2 (0.44)
2C	1.0 (0.10)	1.2 (0.45)	0.8 (0.15)	0.4 (0.88)	2 (0.50)	0.8 (0.40)
3C	4.8 (0.52)	5.2 (0.45)	6.0 (0.27)	7.4 (0.29)	8 (0.91)	5.58 (0.38)
4C	3.2 (0.07)	4.0 (0.33)	4.6 (0.12)	5.0 (0.23)	7 (0.16)	4.20 (0.19)
5C	0.6 (0.19)	0.4 (0.27)	0.6 (0.30)	0.0 (0.00)	1 (0.22)	0.40 (0.19)
6C	2.2 (0.37)	2.4 (0.53)	2.6 (0.57)	3.4 (0.53)	4 (0.67)	2.65 (0.50)
7C	3.4 (0.06)	3.6 (0.04)	2.8 (0.05)	4.4 (0.00)	5 (0.00)	3.55 (0.04)
8C	4.6 (0.12)	5.0 (0.13)	5.6 (0.09)	8.6 (0.13)	9 (0.00)	5.95 (0.12)
9C	1.6 (0.34)	1.2 (0.28)	1.4 (0.30)	2.2 (0.41)	5 (0.66)	1.60 (0.33)
10C	1.4 (0.28)	1.6 (0.33)	0.8 (0.10)	2.2 (0.19)	9 (1.03)	1.50 (0.22)
Group	2.8 (0.23)	3.1 (0.34)	3.1 (0.23)	4.1 (0.25)	6.3 (0.54)	3.3 (0.26)
<hr/>						
Heavy Users						
1H	5.0 (0.21)	6.0 (0.19)	6.6 (0.38)	8.0 (1.21)	13 (0.94)	6.4 (0.49)
2H	2.2 (0.29)	3.0 (0.47)	4.0 (0.88)	5.4 (2.17)	9 (2.53)	3.6 (0.95)
3H	5.2 (2.18)	5.2 (2.19)	4.2 (1.30)	4.8 (1.92)	10 (1.99)	4.8 (1.90)
4H	7.2 (1.29)	7.6 (1.62)	7.8 (1.37)	9.6 (1.94)	15 (2.33)	8.0 (1.56)
5H	7.6 (1.53)	7.6 (1.44)	9.2 (1.49)	10.4 (1.48)	20 (3.12)	8.7 (1.48)
6H	7.4 (2.25)	6.0 (1.28)	6.2 (0.70)	7.6 (0.64)	14 (0.92)	6.8 (1.22)
7H	4.4 (1.29)	5.4 (0.59)	7.8 (1.47)	9.2 (1.40)	15 (1.74)	6.7 (1.19)
8H	7.2 (1.34)	6.4 (1.21)	6.4 (0.98)	9.0 (1.39)	10 (1.00)	7.2 (1.23)
9H	6.2 (1.60)	6.8 (1.22)	9.0 (1.03)	9.2 (1.12)	10 (1.02)	7.8 (1.24)
10H	4.4 (1.99)	4.2 (1.55)	4.2 (1.38)	5.2 (1.68)	13 (2.99)	4.5 (1.65)
Group	5.7 (1.40)	5.8 (1.17)	6.5 (1.10)	7.8 (1.50)	13 (1.86)	6.5 (1.29)

Table VIII - Body Weight - Casual Group

	Initial Weight	Minimal Weight	Maximal Weight	Study Day of Maximal Weight	Final Weight	Maximal Wt. Gain	Net Weight Change
1	154	149	158	D-26	149	+4	-5
2	147	145	150	D-22	145	+3	-2
3	204	204	219	D-26	214	+15	+10
4	144	144	154	D-26	145	+10	+1
5	142	140	148	D-21	144	+6	+2
6	125	124	132	D-26	126	+7	+1
7	153	146	153	D-14	146	0	-7
8	136	134	142	D-26	136	+6	0
9	185	183	194	D-25A	190	+9	+5
10	141	141	154	D-25A	149	+13	+8

Table IX - Body Weight - Heavy Group

	Initial Weight	Minimal Weight	Maximal Weight	Study Day of Maximal Weight	Final Weight	Maximal Wt. Gain	Net Weight Change
1	154	151	160	D-26	158	+6	+4
2	134	130	140	D-30	140	+6	+6
3	176	176	193	D-20	186	+17	+10
4	140	139	147	D-27	144	+8	+5
5	139	137	145	D-25A	141	+6	+2
6	160	155	163	D-25	155	+3	-5
7	155	153	170	D-25	160	+15	+5
8	116	116	134	D-26	129	+18	+13
9	140	140	149	D-21	142	+9	+2
10	164	163	180	D-26	170	+16	+6

TABLE XVI a

STUDY I: Casual Users

MEANS AND STANDARD DEVIATIONS FOR MOOD ASSESSMENT SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
(B) NON-SMOKING AND SMOKING PERIODS; (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

	Pre- Drug	(A) Marihuana Smoking Period Quarter				Post- Drug	(B) Pre & Post Drug Period		(C) Marihuana-Related Special		
		1st	2nd	3rd	4th				Daily	Before	After
Anxiety	2.36 (1.67)	2.96 (1.73)	2.48 (1.36)	3.01 (1.83)	2.35 (1.69)	3.49 (3.25)	2.93 (2.58)	3.57 (1.66)	2.71 (2.54)	2.24 (2.48)	2.03 (1.08)
Hostility	1.50 (0.99)	1.72 (0.85)	1.64 (1.15)	1.88 (1.40)	1.24 (1.14)	1.92 (1.47)	1.71 (1.25)	1.62 (1.15)	1.78 (0.96)	1.39 (1.26)	1.30 (0.58)
Depression	2.54 (2.17)	3.24 (1.97)	3.58 (2.00)	3.97 (1.66)	2.50 (2.26)	3.18 (2.63)	2.86 (2.41)	3.32 (1.98)	2.50 (1.36)	3.28 (2.29)	3.71 (1.82)
Cognitive-Loss	5.56 (1.71)	5.50 (1.54)	5.37 (1.45)	4.83 (1.28)	4.86 (1.34)	4.73 (1.25)	5.15 (1.50)	5.14 (1.41)	4.95 (1.48)	4.97 (1.13)	5.56 (1.35)
Fatigue	1.47 (0.96)	1.80 (0.88)	1.40 (1.22)	1.37 (1.12)	1.35 (1.06)	1.24 (1.09)	1.36 (1.03)	1.48 (1.08)	1.49 (0.73)	0.85 (0.75)	1.55 (0.84)
Guilt-Shame	0.28 (0.64)	0.88 (0.92)	0.72 (0.75)	0.72 (0.74)	0.40 (0.28)	0.59 (0.82)	0.44 (0.74)	0.68 (0.71)	0.50 (1.50)	0.78 (1.34)	0.56 (0.80)
Friendly	9.00 (2.05)	7.96 (1.82)	7.38 (2.23)	8.20 (2.08)	8.69 (2.50)	8.00 (2.20)	8.50 (2.13)	8.06 (2.17)	9.87 (1.85)	8.30 (2.17)	9.00 (2.02)
Carefree	11.00 (3.49)	10.28 (2.68)	11.02 (2.73)	10.27 (3.33)	10.43 (2.23)	10.31 (3.58)	10.66 (3.54)	10.50 (2.77)	9.71 (2.21)	9.98 (2.90)	11.23 (3.05)

TABLE XVI b

STUDY I: Subject #1C

MEANS AND STANDARD DEVIATIONS FOR MOOD ASSESSMENT SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
(B) NON-SMOKING AND SMOKING PERIODS; (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

	(A)					(B)		(C)		
	Pre- Drug	Smoking Period Quarter				Post- Drug	Pre & Post Drug	Drug Period	Marihuana-Related Special	
		1st	2nd	3rd	4th				Daily	Before After
Anxiety	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.50 (1.00)	0.25 (0.71)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Hostility	0.20 (0.45)	0.20 (0.45)	0.20 (0.45)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.10 (0.32)	0.10 (0.32)	0.00 (0.00)	0.00 (0.00)
Depression	0.40 (0.55)	0.20 (0.45)	0.20 (0.45)	0.60 (0.55)	0.60 (0.55)	1.00 (0.00)	0.70 (0.39)	0.40 (0.50)	0.57 (0.51)	2.50 (3.70)
Cognitive-Loss	4.20 (0.84)	3.40 (0.55)	3.20 (0.45)	2.60 (0.89)	2.60 (0.55)	3.25 (0.50)	3.73 (0.69)	2.95 (0.63)	2.79 (0.70)	3.50 (0.58)
Fatigue	1.00 (1.00)	0.20 (0.45)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.50 (0.71)	0.05 (0.23)	0.00 (0.00)	0.00 (0.00)
Guilt-Shame	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.25 (0.50)	0.13 (0.35)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Friendly	5.80 (0.45)	8.00 (1.41)	6.80 (1.30)	7.20 (1.30)	6.00 (0.00)	6.00 (0.00)	5.90 (0.32)	7.00 (1.16)	7.21 (1.42)	7.00 (1.41)
Carefree	8.60 (0.89)	10.00 (1.58)	9.20 (0.84)	8.80 (0.84)	9.00 (0.00)	8.50 (0.58)	8.55 (0.75)	9.25 (0.99)	9.50 (1.09)	9.50 (1.00)

TABLE XVI c

STUDY I: Subject #2C

MEANS AND STANDARD DEVIATIONS FOR MOOD ASSESSMENT SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
 (B) NON-SMOKING AND SMOKING PERIODS; (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

	(A)				(B)		(C)	
	Pre- Drug	Marihuana Smoking Period Quarter			Post- Drug	Pre & Post Drug	Drug Period	Marihuana-Related Special
		1st	2nd	3rd	4th			Daily Before After
Anxiety	2.60 (1.14)	1.60 (0.55)	1.40 (0.55)	1.20 (0.45)	0.75 (0.50)	2.30 (1.07)	1.24 (0.51)	0.75 (0.50) 1.25 (0.50)
Hostility	4.40 (1.67)	0.60 (0.55)	0.60 (0.55)	1.40 (1.52)	0.75 (0.50)	2.70 (1.46)	0.84 (0.89)	0.50 (0.58) 1.25 (0.50)
Depression	1.60 (0.89)	1.20 (0.45)	1.20 (0.84)	1.00 (0.71)	0.25 (0.50)	1.00 (0.74)	0.91 (0.65)	0.75 (0.96) 0.75 (0.50)
Cognitive-Loss	7.20 (1.48)	7.00 (1.87)	5.80 (1.30)	5.00 (1.22)	5.50 (0.58)	6.20 (1.20)	5.83 (1.32)	5.50 (1.91) 8.00 (0.00)
Fatigue	1.40 (0.89)	0.60 (0.89)	0.40 (0.55)	0.20 (0.45)	0.50 (0.58)	1.10 (0.71)	0.43 (0.64)	0.00 (0.00) 0.00 (0.00)
Guilt-Shame	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.25 (0.50) 0.00 (0.00)
Friendly	8.80 (3.11)	6.60 (1.34)	9.40 (3.05)	8.60 (2.79)	10.25 (2.06)	8.10 (2.60)	8.71 (2.40)	8.00 (1.83) 8.25 (2.06)
Carefree	14.20 (3.90)	15.00 (0.71)	16.00 (2.55)	14.00 (3.65)	17.00 (2.16)	14.70 (3.12)	15.50 (2.50)	12.75 (4.92) 18.00 (2.16)

TABLE XVI d

STUDY I: Subject #3C

MEANS AND STANDARD DEVIATIONS FOR MOOD ASSESSMENT SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
(B) NON-SMOKING AND SMOKING PERIODS; (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

(A)						(B)		(C)			
	Pre-Drug	Marihuana Smoking Period Quarter				Post-Drug	Pre & Post Drug Period	Marihuana-Related Special			
		1st	2nd	3rd	4th			Daily	Before	After	
Anxiety	1.60 (1.14)	0.40 (0.55)	0.60 (0.89)	0.60 (0.55)	1.20 (0.45)	3.40 (1.52)	2.50 (1.34)	0.70 (0.63)	0.75 (0.58)	0.50 (0.58)	0.25 (0.50)
Hostility	1.60 (0.55)	1.20 (0.45)	1.80 (1.30)	2.00 (0.00)	1.20 (1.10)	3.60 (1.34)	2.60 (1.02)	1.55 (0.88)	1.63 (0.89)	2.00 (0.00)	2.25 (0.50)
Depression	0.80 (0.45)	1.00 (0.00)	2.60 (2.07)	2.40 (0.55)	2.40 (0.55)	3.40 (2.07)	2.10 (1.50)	2.10 (1.11)	2.19 (1.28)	2.25 (1.50)	2.50 (1.73)
Cognitive-Loss	5.60 (0.89)	6.40 (1.52)	6.60 (0.55)	6.20 (1.10)	7.00 (0.00)	4.20 (1.79)	4.90 (1.41)	6.55 (0.98)	6.63 (1.02)	7.00 (0.00)	7.00 (0.00)
Fatigue	0.60 (1.34)	1.20 (0.84)	1.60 (0.89)	1.60 (0.89)	1.20 (1.10)	1.60 (2.07)	1.10 (1.74)	1.40 (0.94)	1.31 (0.87)	1.00 (0.82)	1.00 (0.82)
Guilt-Shame	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Friendly	13.80 (1.79)	13.20 (0.84)	14.20 (1.30)	11.80 (0.45)	12.00 (0.71)	10.00 (1.87)	11.90 (1.83)	12.80 (0.88)	12.44 (1.03)	12.25 (0.50)	12.75 (1.50)
Carefree	13.60 (6.02)	16.20 (1.92)	14.00 (1.73)	15.20 (0.84)	13.60 (1.14)	11.20 (5.72)	12.40 (5.87)	14.75 (1.47)	14.75 (1.24)	13.25 (1.50)	14.25 (2.22)

TABLE XVI e

STUDY I: Subject #4C

MEANS AND STANDARD DEVIATIONS FOR MOOD ASSESSMENT SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
(B) NON-SMOKING AND SMOKING PERIODS; (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

(A)						(B)		(C)		
	Pre-Drug	Marihuana Smoking Period Quarter				Post-Drug	Pre & Post Drug		Marihuana-Related Special	
		1st	2nd	3rd	4th		Drug	Drug Period	Daily Before	After
Anxiety	0.20 (0.45)	0.40 (0.89)	0.60 (0.89)	0.80 (0.45)	1.00 (0.71)	0.60 (0.89)	0.40 (0.71)	1.00 (0.89)	0.75 (0.96)	0.75 (0.96)
Hostility	0.20 (0.45)	0.60 (0.55)	0.60 (0.55)	1.00 (0.00)	1.00 (0.00)	1.40 (0.55)	0.80 (0.50)	0.83 (0.41)	1.00 (0.00)	0.50 (0.58)
Depression	0.20 (0.45)	0.00 (0.00)	0.00 (0.00)	0.20 (0.45)	0.00 (0.00)	0.00 (0.00)	0.10 (0.32)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Cognitive-Loss	4.20 (1.10)	2.40 (1.82)	3.80 (1.30)	3.40 (1.52)	3.40 (1.52)	3.00 (0.00)	3.60 (0.78)	3.67 (2.25)	3.00 (0.00)	5.00 (0.82)
Fatigue	0.80 (0.45)	1.00 (1.00)	0.40 (0.55)	0.20 (0.45)	0.60 (0.89)	0.80 (0.45)	0.80 (0.45)	0.17 (0.41)	0.25 (0.50)	0.00 (0.00)
Guilt-Shame	0.40 (0.89)	0.20 (0.45)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.20 (0.63)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Friendly	6.20 (1.30)	3.60 (2.07)	6.60 (0.55)	6.00 (0.00)	6.00 (0.71)	6.00 (0.00)	6.10 (0.92)	5.33 (2.66)	6.00 (0.00)	6.75 (0.96)
Carefree	9.00 (1.22)	4.40 (3.29)	9.40 (1.52)	6.60 (2.07)	6.20 (1.10)	4.80 (0.45)	6.90 (0.92)	6.83 (3.54)	7.00 (1.41)	8.00 (0.82)

TABLE XVI f

STUDY I: Subject #5C

MEANS AND STANDARD DEVIATIONS FOR MOOD ASSESSMENT SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
(B) NON-SMOKING AND SMOKING PERIODS; (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

	(A)					(B)		(C)	
	Pre- Drug	Smoking Period Quarter				Post- Drug	Pre & Post Drug Period	Marihuana-Related Special	
		1st	2nd	3rd	4th			Daily	Before After
Anxiety	3.20 (1.92)	2.40 (0.89)	3.20 (1.30)	3.80 (0.45)	3.25 (1.71)	3.60 (0.89)	3.40 (1.50)	2.00 (0.00)	2.00 (0.00)
Hostility	1.40 (0.89)	2.00 (1.00)	2.00 (1.22)	1.80 (1.64)	0.75 (0.96)	2.60 (1.82)	2.00 (1.43)	2.00 (0.00)	1.00 (0.00)
Depression	5.80 (5.12)	4.80 (4.15)	5.00 (3.54)	4.40 (2.70)	2.50 (3.70)	1.80 (3.49)	3.80 (4.38)	1.00 (0.00)	8.00 (0.00)
Cognitive-Loss	6.40 (2.70)	4.80 (1.79)	4.00 (2.12)	4.60 (1.52)	4.75 (1.71)	4.20 (1.30)	5.30 (2.12)	3.00 (0.00)	4.00 (0.00)
Fatigue	0.50 (0.58)	1.40 (1.34)	1.40 (1.52)	1.00 (1.00)	0.75 (1.50)	0.00 (0.00)	0.25 (0.41)	3.00 (0.00)	0.00 (0.00)
Guilt-Shame	0.60 (0.89)	0.60 (0.89)	1.40 (1.14)	1.00 (0.71)	0.25 (0.50)	0.20 (0.45)	0.40 (0.71)	0.00 (0.00)	2.00 (0.00)
Friendly	9.60 (2.51)	7.60 (3.21)	5.80 (3.56)	7.20 (2.59)	6.50 (2.38)	5.80 (1.30)	7.70 (2.00)	10.00 (0.00)	5.00 (0.00)
Carefree	9.60 (2.61)	7.00 (2.74)	8.00 (4.30)	9.00 (3.54)	11.50 (3.42)	9.20 (2.77)	9.40 (2.69)	8.00 (0.00)	7.00 (0.00)

TABLE XVI g

STUDY I: Subject #6C

MEANS AND STANDARD DEVIATIONS FOR MOOD ASSESSMENT SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
(B) NON-SMOKING AND SMOKING PERIODS; (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

(A)							(B)		(C)	
	Pre- Drug	Marihuana Smoking Period Quarter				Post- Drug	Pre & Post Drug	Drug Period	Marihuana-Related Special	
		1st	2nd	3rd	4th				Daily	Before After
Anxiety	6.60 (3.58)	9.60 (3.78)	5.80 (3.27)	7.00 (0.00)	6.40 (3.65)	7.00 (4.95)	6.80 (4.32)	7.20 (3.09)	11.50 (6.36)	7.00 (0.00)
Hostility	3.80 (1.79)	4.80 (1.10)	4.20 (0.84)	3.20 (1.10)	2.20 (1.64)	1.20 (1.10)	2.50 (1.49)	3.60 (1.21)	4.50 (2.12)	2.50 (0.71)
Depression	9.00 (0.00)	9.80 (1.79)	8.60 (0.89)	9.00 (0.00)	8.60 (1.52)	8.00 (1.58)	8.50 (1.12)	9.00 (1.26)	11.00 (2.83)	9.00 (0.00)
Cognitive-Loss	5.80 (1.10)	5.80 (1.79)	5.40 (0.89)	6.00 (1.22)	6.40 (1.34)	6.60 (1.34)	6.20 (1.23)	5.90 (1.35)	7.50 (2.12)	5.50 (0.71)
Fatigue	3.00 (0.00)	4.80 (0.45)	3.40 (0.89)	3.00 (0.71)	3.20 (0.45)	2.40 (1.34)	2.70 (0.95)	3.60 (0.65)	3.50 (0.71)	3.00 (0.00)
Guilt-Shame	1.60 (1.52)	3.80 (1.79)	1.80 (1.64)	1.40 (1.52)	0.20 (0.45)	0.00 (0.00)	0.80 (1.07)	1.80 (1.45)	4.00 (4.24)	1.50 (2.12)
Friendly	8.20 (3.03)	7.40 (1.95)	6.80 (0.84)	8.60 (1.95)	9.40 (3.13)	8.00 (4.95)	8.10 (4.10)	8.05 (2.13)	9.00 (1.41)	10.50 (3.54)
Carefree	10.80 (2.49)	9.40 (0.55)	9.40 (0.55)	12.00 (2.12)	10.60 (1.67)	11.40 (4.93)	11.10 (3.91)	10.35 (1.40)	12.00 (2.83)	9.00 (2.83)

TABLE XVI h

STUDY I: Subject #7C

MEANS AND STANDARD DEVIATIONS FOR MOOD ASSESSMENT SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
(B) NON-SMOKING AND SMOKING PERIODS; (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

	(A)					(B)		(C)		
	Pre-Drug	Smoking Period Quarter				Post-Drug	Pre & Post Drug	Drug Period	Marihuana-Related Special	
		1st	2nd	3rd	4th				Daily	Before After
Anxiety	0.60 (0.55)	0.20 (0.45)	0.20 (0.45)	1.80 (2.95)	1.00 (0.00)	1.00 (0.00)	0.80 (0.39)	0.80 (1.51)	0.67 (0.50)	0.67 (0.58)
Hostility	0.20 (0.45)	0.20 (0.45)	1.00 (0.00)	1.00 (0.00)	0.80 (0.45)	1.40 (0.89)	0.80 (0.71)	0.75 (0.32)	0.78 (0.44)	0.67 (0.58)
Depression	0.00 (0.00)	0.00 (0.00)	0.80 (0.45)	1.00 (0.71)	0.60 (0.55)	0.40 (0.55)	0.20 (0.39)	0.60 (0.50)	0.56 (0.73)	1.00 (0.58)
Cognitive-Loss	4.00 (1.22)	5.60 (0.55)	5.20 (0.84)	5.60 (0.89)	4.20 (2.39)	5.40 (0.55)	4.70 (0.95)	5.15 (1.37)	5.22 (0.83)	4.33 (1.15)
Fatigue	0.40 (0.55)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.20 (0.39)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Guilt-Shame	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Friendly	8.40 (1.14)	9.60 (1.14)	10.40 (1.34)	11.20 (0.84)	10.80 (0.84)	10.20 (1.30)	9.30 (1.22)	10.50 (1.06)	10.56 (1.33)	10.33 (2.08)
Carefree	10.40 (1.67)	11.40 (1.34)	12.40 (1.14)	10.60 (3.71)	11.00 (1.00)	11.40 (1.14)	10.90 (1.43)	11.35 (2.11)	10.67 (2.74)	9.33 (3.05)
										8.67 (2.31)

TABLE XVI i

STUDY I: Subject #8C

MEANS AND STANDARD DEVIATIONS FOR MOOD ASSESSMENT SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
(B) NON-SMOKING AND SMOKING PERIODS; (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

	(A)					(B)		(C)	
	Pre-Drug	Smoking Period Quarter				Post-Drug	Pre & Post Drug	Pre & Post Drug	Marihuana-Related Special
		1st	2nd	3rd	4th		Drug Period	Drug Period	Daily Before After
Anxiety	3.40 (2.61)	4.40 (1.82)	2.40 (0.55)	2.40 (0.89)	2.20 (0.45)	3.40 (2.97)	3.40 (2.80)	2.85 (1.07)	2.81 (1.38) 2.67 (1.15) 3.00 (1.00)
Hostility	2.20 (1.30)	5.00 (1.22)	2.60 (1.67)	4.80 (1.48)	3.80 (1.30)	5.40 (2.61)	3.80 (2.06)	4.05 (1.43)	4.44 (1.31) 3.00 (2.65) 4.33 (1.15)
Depression	2.80 (2.17)	4.40 (1.95)	3.20 (1.79)	2.60 (1.34)	1.60 (0.55)	3.60 (2.07)	3.20 (2.12)	2.95 (1.51)	2.67 (1.54) 2.67 (2.89) 3.67 (1.53)
Cognitive-Loss	7.60 (2.61)	7.40 (1.52)	5.25 (0.50)	6.00 (0.00)	6.00 (0.71)	5.80 (1.30)	6.70 (2.06)	6.16 (0.88)	6.27 (1.10) 5.33 (0.58) 4.67 (1.53)
Fatigue	2.60 (0.55)	2.80 (0.45)	1.60 (1.52)	1.60 (1.14)	2.00 (0.00)	2.40 (1.52)	2.50 (1.14)	2.00 (0.98)	1.94 (0.93) 2.00 (1.00) 2.33 (0.58)
Guilt-Shame	0.20 (0.45)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.60 (0.89)	0.40 (0.71)	0.00 (0.00)	0.00 (0.00) 0.33 (0.58) 0.33 (0.58)
Friendly	13.00 (1.41)	8.00 (1.22)	8.20 (1.79)	9.60 (2.51)	11.60 (4.28)	10.80 (1.30)	11.90 (1.36)	9.35 (2.71)	9.88 (3.01) 9.33 (2.52) 11.33 (1.15)
Carefree	15.20 (4.27)	10.60 (0.89)	9.80 (0.45)	10.40 (0.55)	10.40 (3.65)	12.20 (1.10)	13.70 (3.12)	10.30 (1.91)	10.44 (1.97) 10.67 (2.08) 12.33 (1.15)

TABLE XVI j

STUDY I: Subject #9C

MEANS AND STANDARD DEVIATIONS FOR MOOD ASSESSMENT SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
(B) NON-SMOKING AND SMOKING PERIODS; (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

(A)						(B)		(C)		
	Pre- Drug	Marihuana Smoking Period Quarter				Post- Drug	Pre & Post Drug	Marihuana-Related Special		
		1st	2nd	3rd	4th			Daily	Before After	
Anxiety	1.20 (0.84)	1.60 (1.95)	1.00 (0.71)	2.25 (3.20)	1.20 (0.45)	3.40 (7.06)	2.30 (5.03)	1.51 (1.92)	3.00 (2.83)	0.33 (0.58)
Hostility	0.20 (0.45)	0.00 (0.00)	0.40 (0.55)	0.00 (0.00)	0.40 (0.55)	1.20 (2.17)	0.70 (1.57)	0.20 (0.39)	0.00 (0.00)	0.00 (0.00)
Depression	2.00 (1.41)	1.20 (1.30)	1.60 (1.34)	0.50 (0.58)	0.40 (0.55)	0.40 (0.55)	1.20 (1.07)	0.93 (1.02)	2.00 (1.41)	0.67 (0.58)
Cognitive-Loss	5.40 (1.52)	6.00 (0.71)	6.00 (1.41)	3.25 (0.50)	3.20 (1.92)	2.80 (0.45)	4.10 (1.12)	4.61 (1.27)	4.50 (2.12)	4.33 (1.53)
Fatigue	2.20 (1.92)	2.80 (1.30)	3.40 (2.07)	2.25 (1.50)	2.20 (2.39)	1.80 (0.84)	2.00 (1.48)	2.66 (1.87)	2.00 (1.41)	2.00 (1.00)
Guilt-Shame	0.00 (0.00)	0.20 (0.45)	0.60 (0.55)	0.00 (0.00)	0.00 (0.00)	0.20 (0.45)	0.10 (0.32)	0.20 (0.35)	0.00 (0.00)	0.00 (0.00)
Friendly	6.60 (1.52)	10.20 (1.10)	8.00 (2.00)	5.75 (0.50)	6.80 (4.60)	6.20 (1.79)	6.40 (1.66)	7.69 (2.58)	10.50 (2.12)	7.33 (1.00)
Carefree	7.80 (2.28)	10.60 (4.56)	10.40 (1.52)	8.25 (2.63)	5.80 (3.27)	7.40 (1.82)	7.60 (2.06)	8.76 (3.19)	5.50 (2.12)	7.33 (5.13)

STUDY I: Subject #10C

MEANS AND STANDARD DEVIATIONS FOR MOOD ASSESSMENT SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS; (B) NON-SMOKING AND SMOKING PERIODS; (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

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TABLE XVII a

STUDY II: Heavy Users

MEANS AND STANDARD DEVIATIONS FOR MOOD ASSESSMENT SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
(B) NON-SMOKING AND SMOKING PERIODS; (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

	(A)					(B)		(C)		
	Pre- Drug	Smoking Period Quarter				Post- Drug	Pre & Post Drug	Drug Period	Marihuana-Related Special	
		1st	2nd	3rd	4th				Daily	Before After
Anxiety	2.10 (1.54)	2.00 (2.11)	1.48 (1.11)	1.16 (0.91)	1.51 (1.11)	2.14 (1.60)	2.12 (1.57)	1.54 (1.39)	2.20 (1.59)	2.18 (1.95)
Hostility	1.14 (1.22)	1.08 (0.85)	1.12 (0.96)	0.96 (0.85)	1.02 (1.07)	1.34 (0.95)	1.24 (1.24)	1.05 (0.94)	0.93 (0.81)	1.53 (1.74)
Depression	1.36 (1.21)	1.32 (1.41)	1.34 (1.26)	1.12 (0.77)	0.84 (1.12)	0.72 (0.79)	1.04 (1.02)	1.16 (1.16)	1.16 (0.90)	1.30 (2.30)
Cognitive-Loss	5.40 (1.33)	5.74 (1.53)	4.80 (1.66)	4.64 (1.52)	4.52 (1.73)	4.28 (1.78)	4.84 (1.57)	4.93 (1.61)	5.50 (1.69)	5.77 (1.20)
Fatigue	2.34 (2.14)	1.84 (1.31)	1.04 (1.00)	1.42 (1.05)	1.41 (1.48)	2.56 (2.28)	2.45 (2.45)	1.43 (1.23)	1.15 (1.21)	1.26 (1.43)
Guilt-Shame	0.10 (0.46)	0.16 (1.13)	0.08 (0.41)	0.00 (0.00)	0.02 (0.14)	0.00 (0.00)	0.05 (0.32)	.07 (0.60)	0.04 (0.33)	0.03 (0.16)
Friendly	9.54 (2.04)	9.96 (2.74)	8.80 (2.72)	8.36 (1.76)	8.52 (2.35)	8.28 (3.26)	8.91 (2.72)	8.91 (2.43)	10.16 (1.90)	9.56 (1.33)
Carefree	11.39 (3.50)	13.54 (3.94)	11.28 (4.14)	11.10 (2.93)	11.73 (4.17)	10.52 (4.17)	10.96 (3.85)	11.91 (3.83)	13.29 (4.07)	14.08 (2.72)

TABLE XVII b

STUDY II: Subject #1H

MEANS AND STANDARD DEVIATIONS FOR MOOD ASSESSMENT SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
(B) NON-SMOKING AND SMOKING PERIODS; (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

		(A)				(B)		(C)				
		Marihuana Smoking Period Quarter				Pre & Post Drug Period		Marihuana-Related Special				
		Pre-Drug	1st	2nd	3rd	4th	Post-Drug	Drug	Period	Daily	Before	After
Anxiety		3.80 (1.48)	2.60 (2.07)	2.20 (1.10)	3.00 (1.41)	2.00 (0.82)	3.20 (2.17)	3.50 (1.86)	2.45 (1.43)	6.00 (0.00)	3.00 (1.41)	3.25 (1.89)
Hostility		2.20 (1.79)	1.00 (0.00)	1.20 (0.45)	2.80 (1.79)	1.50 (1.29)	2.80 (1.64)	2.50 (1.72)	1.63 (1.13)	1.00 (0.00)	1.50 (1.73)	1.50 (1.29)
Depression		1.80 (0.45)	1.20 (0.45)	0.60 (0.55)	1.40 (1.14)	1.75 (1.50)	1.00 (0.00)	1.40 (0.32)	1.24 (1.01)	2.00 (0.00)	1.50 (1.00)	2.25 (1.26)
Cognitive-Loss		8.80 (1.10)	7.00 (0.71)	6.20 (1.30)	6.40 (1.52)	5.00 (1.15)	6.80 (0.45)	7.80 (0.84)	6.15 (1.21)	7.00 (0.00)	7.25 (0.96)	7.50 (0.58)
Fatigue		1.20 (0.84)	0.80 (0.84)	2.00 (1.22)	2.20 (0.84)	1.25 (2.50)	2.40 (0.55)	1.80 (0.71)	1.56 (1.51)	0.00 (0.00)	1.25 (1.26)	1.50 (1.29)
Guilt-Shame		0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Friendly		12.40 (0.89)	12.00 (0.00)	12.00 (0.00)	9.00 (1.87)	10.25 (2.22)	10.80 (2.17)	11.60 (1.66)	10.81 (1.45)	12.00 (0.00)	12.00 (0.00)	11.75 (2.06)
Carefree		18.60 (0.55)	16.80 (2.39)	16.40 (2.30)	13.80 (2.95)	15.00 (4.08)	16.60 (3.58)	17.60 (2.56)	15.50 (3.01)	13.00 (0.00)	16.75 (1.50)	16.50 (2.38)

TABLE XVII C
STUDY II: Subject #2H

**MEANS AND STANDARD DEVIATIONS FOR MOOD ASSESSMENT SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
(B) NON-SMOKING AND SMOKING PERIODS; (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS**

	(A)					(B)		(C)	
	Pre-Drug	Smoking Period Quarter				Post-Drug	Pre & Post Drug	Daily	Marihuana-Related Special
		1st	2nd	3rd	4th	Drug	Period	Before	After
Anxiety	2.60 (2.07)	5.80 (4.71)	3.00 (2.00)	0.40 (0.55)	1.80 (1.30)	2.20 (2.17)	2.40 (2.12)	2.50 (1.91)	3.00 (2.45)
Hostility	3.00 (2.55)	2.40 (1.52)	2.00 (1.58)	0.80 (0.84)	1.60 (0.89)	1.60 (0.89)	2.30 (1.91)	2.75 (0.96)	2.25 (2.06)
Depression	1.00 (1.73)	1.80 (4.02)	2.20 (2.39)	0.60 (0.55)	0.40 (0.55)	0.60 (0.89)	0.80 (1.38)	0.25 (0.50)	1.25 (0.96)
Cognitive-Loss	4.80 (0.84)	4.80 (1.30)	4.00 (0.71)	2.20 (1.48)	4.00 (1.58)	1.60 (1.52)	3.20 (1.23)	4.25 (0.96)	3.75 (1.71)
Fatigue	3.80 (2.39)	3.20 (2.28)	0.60 (0.55)	2.40 (1.52)	3.20 (0.45)	4.80 (4.02)	4.30 (3.31)	1.25 (0.96)	1.25 (0.50)
Guilt-Shame	0.00 (0.00)	1.60 (3.58)	0.00 (0.00)	0.00 (0.00)	0.20 (0.45)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.25 (0.50)
Friendly	6.80 (1.30)	8.20 (2.68)	5.80 (0.84)	5.40 (0.55)	5.60 (0.55)	6.00 (1.22)	6.40 (1.26)	4.75 (0.96)	8.00 (1.83)
Carefree	5.60 (3.21)	9.40 (4.34)	6.80 (1.64)	7.60 (3.21)	8.00 (1.22)	6.20 (1.79)	5.90 (2.60)	8.25 (2.22)	12.25 (3.59)

TABLE XVII d

STUDY II: Subject #3H

MEANS AND STANDARD DEVIATIONS FOR MOOD ASSESSMENT SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
(B) NON-SMOKING AND SMOKING PERIODS; (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

	(A)				(B)		(C)		
	Pre- Drug	Marihuana Smoking Period Quarter			Post- Drug	Pre & Post Drug	Drug Period	Marihuana-Related Special	
		1st	2nd	3rd	4th			Daily	Before After
Anxiety	2.20 (2.39)	1.80 (1.92)	2.60 (1.14)	2.20 (1.48)	3.00 (1.41)	2.60 (1.82)	2.40 (2.12)	2.89 (1.45)	3.00 (1.83)
Hostility	0.80 (1.10)	0.80 (0.84)	2.00 (1.58)	0.60 (0.89)	0.60 (0.55)	1.20 (0.84)	1.00 (0.98)	1.00 (1.32)	0.25 (0.50)
Depression	1.40 (0.60)	0.80 (0.84)	1.20 (1.30)	1.40 (0.55)	0.20 (0.45)	0.40 (0.55)	0.90 (0.58)	1.22 (1.09)	0.50 (0.58)
Cognitive-Loss	5.40 (1.14)	6.40 (1.82)	5.80 (2.39)	6.40 (1.52)	5.20 (3.27)	5.20 (2.68)	5.30 (2.06)	6.33 (2.60)	7.50 (1.00)
Fatigue	2.60 (1.34)	2.20 (1.30)	1.00 (0.71)	1.80 (1.10)	1.40 (1.34)	4.20 (3.42)	3.40 (2.60)	1.11 (1.05)	0.60 (0.89)
Guilt-Shame	0.60 (1.34)	0.00 (0.00)	0.80 (1.30)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.30 (0.95)	0.33 (1.00)	0.00 (0.00)
Friendly	7.80 (2.39)	8.20 (1.79)	5.80 (0.84)	7.00 (0.71)	5.40 (3.13)	7.20 (2.17)	7.50 (2.28)	7.22 (1.48)	9.50 (1.91)
Carefree	10.00 (4.30)	13.60 (2.51)	9.80 (4.38)	13.80 (3.27)	14.00 (4.80)	11.00 (2.92)	10.50 (3.68)	14.22 (4.29)	16.00 (0.82)

TABLE XVII e

STUDY II: Subject #4H

MEANS AND STANDARD DEVIATIONS FOR MOOD ASSESSMENT SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
 (B) NON-SMOKING AND SMOKING PERIODS; (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

	(A)					Post-Drug	(B)		(C)		
	Pre-Drug	Marihuana Smoking Period Quarter					Pre & Post Drug	Drug Period	Daily	Before	After
		1st	2nd	3rd	4th						
Anxiety	1.20 (0.84)	0.60 (0.89)	0.00 (0.00)	0.00 (0.00)	0.40 (0.89)	0.60 (0.89)	0.90 (0.86)	0.25 (0.63)	0.44 (0.88)	0.00 (0.00)	0.50 (1.00)
Hostility	1.00 (0.00)	1.80 (0.45)	1.80 (0.84)	1.80 (0.45)	2.00 (0.00)	1.00 (0.71)	1.00 (0.50)	1.85 (0.53)	1.78 (0.44)	1.75 (0.50)	1.75 (1.26)
Depression	0.00 (0.00)	0.20 (0.45)	0.00 (0.00)	0.00 (0.00)	0.20 (0.45)	0.00 (0.00)	0.00 (0.00)	0.10 (0.32)	0.00 (0.00)	0.50 (1.00)	0.00 (0.00)
Cognitive-Loss	4.60 (1.82)	6.20 (0.84)	4.20 (1.92)	6.40 (0.89)	6.00 (0.00)	3.80 (2.17)	4.20 (2.00)	5.70 (1.14)	5.67 (1.50)	4.75 (1.26)	6.00 (0.00)
Fatigue	1.40 (0.89)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.20 (0.45)	0.20 (0.45)	0.80 (0.71)	0.05 (0.22)	0.00 (0.00)	0.25 (0.50)	0.25 (0.50)
Guilt-Shame	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Friendly	8.40 (4.39)	14.40 (2.07)	13.00 (4.58)	12.00 (1.41)	12.20 (0.45)	6.20 (5.40)	7.30 (4.92)	12.90 (2.62)	12.89 (2.62)	11.50 (2.52)	12.75 (0.96)
Carefree	11.00 (2.92)	18.20 (3.63)	15.80 (5.45)	16.00 (1.00)	16.80 (0.84)	9.40 (5.37)	10.20 (4.32)	16.70 (3.34)	16.78 (4.41)	17.00 (2.58)	16.75 (4.57)

TABLE XVII f

STUDY II: Subject #5H

MEANS AND STANDARD DEVIATIONS FOR MOOD ASSESSMENT SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
 (B) NON-SMOKING AND SMOKING PERIODS; (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

(A)							(B)		(C)		
	Pre- Drug	Marihuana Smoking Period Quarter				Post- Drug	Pre & Post Drug	Drug Period	Marihuana-Related Special		
		1st	2nd	3rd	4th				Daily Before	After	
Anxiety	4.80 (2.59)	2.60 (1.52)	1.20 (0.84)	2.80 (1.79)	2.20 (1.30)	3.40 (1.14)	4.10 (2.00)	2.20 (1.41)	2.56 (1.81)	1.50 (0.58)	1.25 (1.89)
Hostility	1.20 (1.30)	0.40 (0.55)	0.40 (0.55)	0.00 (0.00)	0.70 (0.84)	1.80 (1.30)	1.50 (1.30)	0.38 (0.57)	0.56 (0.73)	0.50 (0.58)	0.50 (1.00)
Depression	2.40 (0.89)	2.00 (0.00)	2.00 (0.71)	2.40 (0.89)	2.00 (0.00)	2.00 (1.00)	2.20 (0.95)	2.10 (0.57)	2.00 (0.00)	2.25 (0.50)	2.25 (0.50)
Cognitive-Loss	5.80 (0.84)	5.60 (1.52)	4.80 (0.84)	4.60 (0.55)	3.40 (1.34)	3.00 (1.00)	4.40 (0.92)	4.60 (1.13)	4.56 (1.59)	5.25 (1.50)	4.50 (0.58)
Fatigue	2.40 (1.14)	2.00 (0.71)	0.40 (0.55)	1.20 (1.30)	1.20 (1.64)	2.60 (1.67)	2.50 (1.43)	1.20 (1.14)	1.33 (1.50)	1.00 (0.82)	1.25 (0.96)
Guilt-Shame	0.40 (0.55)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.20 (0.39)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Friendly	11.80 (0.45)	12.20 (0.45)	12.20 (0.45)	12.00 (0.00)	11.20 (1.10)	9.00 (5.10)	10.40 (3.62)	11.90 (0.63)	11.78 (1.09)	12.50 (0.58)	13.25 (0.96)
Carefree	11.60 (2.97)	14.00 (2.35)	10.00 (0.71)	9.20 (1.10)	8.00 (1.22)	6.20 (2.95)	8.90 (2.96)	10.30 (1.48)	10.67 (3.61)	13.50 (3.00)	12.25 (3.95)

TABLE XVII g

STUDY II: Subject #6H

MEANS AND STANDARD DEVIATIONS FOR MOOD ASSESSMENT SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
(B) NON-SMOKING AND SMOKING PERIODS; (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

	(A)					Post-Drug	(B)		(C)		
	Pre-Drug	Smoking Period Quarter					Pre & Post Drug	Drug Period	Marihuana-Related Special		
		1st	2nd	3rd	4th				Daily	Before	After
Anxiety	0.75 (0.96)	0.60 (0.89)	0.40 (0.55)	0.20 (0.45)	0.50 (0.58)	1.40 (0.55)	1.08 (0.78)	0.43 (0.64)	0.57 (0.79)	0.75 (0.96)	0.00 (0.00)
Hostility	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.40 (0.55)	0.20 (0.39)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Depression	0.00 (0.00)	0.00 (0.00)	1.00 (0.71)	0.20 (0.45)	1.25 (0.50)	0.60 (0.55)	0.30 (0.39)	0.61 (0.49)	0.29 (0.49)	0.25 (0.50)	0.25 (0.50)
Cognitive-Loss	6.00 (0.00)	6.20 (0.84)	5.40 (1.14)	4.40 (1.14)	5.75 (0.50)	5.60 (0.89)	5.80 (0.63)	5.44 (0.94)	6.14 (0.69)	6.75 (0.96)	7.00 (1.41)
Fatigue	2.75 (3.20)	3.00 (1.41)	1.80 (1.10)	2.40 (0.55)	1.75 (1.50)	2.40 (1.82)	2.58 (2.60)	2.28 (1.20)	2.14 (1.21)	1.50 (1.73)	2.00 (2.45)
Guilt-Shame	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Friendly	8.00 (2.31)	9.80 (2.28)	8.80 (0.84)	8.80 (2.17)	11.50 (1.00)	11.40 (1.14)	9.70 (1.82)	9.73 (1.70)	10.86 (1.21)	11.25 (0.58)	10.50 (1.29)
Carefree	9.50 (1.73)	12.60 (2.70)	10.00 (1.00)	9.80 (0.84)	12.25 (1.50)	13.20 (3.56)	11.35 (2.80)	11.16 (1.68)	12.57 (2.44)	14.50 (2.08)	14.75 (2.22)

TABLE XVII h

STUDY II: Subject #7H

MEANS AND STANDARD DEVIATIONS FOR MOOD ASSESSMENT SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
(B) NON-SMOKING AND SMOKING PERIODS; (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

	(A)					(B)		(C)		
	Pre- Drug	Marihuana Smoking Period Quarter			Post- Drug	Pre & Post Drug	Drug Period	Daily Before	Special After	
		1st	2nd	3rd	4th					
Anxiety	1.60 (0.55)	3.00 (2.35)	1.20 (1.10)	0.80 (0.45)	0.00 (0.00)	1.00 (0.71)	1.30 (0.63)	1.25 (1.32)	3.00 (2.94)	1.75 (2.87)
Hostility	1.40 (1.14)	1.20 (1.30)	0.60 (0.89)	1.40 (0.55)	0.75 (0.98)	1.20 (0.84)	1.30 (1.00)	0.99 (0.97)	1.50 (1.29)	1.00 (0.00)
Depression	4.80 (2.95)	5.20 (0.84)	3.20 (1.10)	4.40 (1.52)	1.00 (0.00)	1.00 (1.22)	2.90 (2.26)	3.45 (1.03)	4.25 (2.22)	3.75 (3.59)
Cognitive-Loss	6.80 (1.10)	7.00 (0.71)	5.80 (1.10)	4.00 (1.22)	4.75 (0.96)	4.40 (1.82)	5.60 (1.50)	5.39 (1.02)	6.50 (0.58)	5.75 (2.06)
Fatigue	0.80 (0.84)	2.00 (0.71)	1.20 (0.84)	1.80 (0.45)	1.25 (0.50)	1.40 (2.07)	1.10 (1.58)	1.56 (0.64)	1.75 (0.50)	1.50 (0.58)
Guilt-Shame	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.50 (1.00)
Friendly	11.80 (1.79)	9.20 (2.95)	6.60 (0.55)	7.00 (0.71)	8.25 (0.96)	7.60 (2.07)	9.70 (1.93)	7.76 (1.61)	8.50 (2.52)	7.75 (1.50)
Carefree	14.40 (2.19)	12.80 (2.17)	10.60 (2.19)	9.80 (0.45)	10.75 (2.50)	9.80 (4.09)	12.10 (3.28)	10.99 (2.00)	12.75 (2.22)	10.75 (1.50)
										13.50 (3.00)

TABLE XVII i

STUDY II: Subject #8H

MEANS AND STANDARD DEVIATIONS FOR MOOD ASSESSMENT SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
(B) NON-SMOKING AND SMOKING PERIODS; (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

(A)		Marihuana Smoking Period Quarter				(B)		(C)			
Pre- Drug	1st	2nd	3rd	4th	Post- Drug	Pre & Post Drug Period	Marihuana-Related Special				
							Daily	Before	After		
Anxiety	0.80 (1.10)	1.20 (2.17)	1.20 (1.64)	0.20 (0.45)	1.60 (1.82)	2.00 (1.41)	1.40 (1.26)	1.05 (1.65)	1.63 (2.07)	4.00 (1.83)	1.75 (1.50)
Hostility	0.40 (0.55)	1.40 (1.14)	0.20 (0.45)	0.40 (0.89)	0.40 (0.89)	0.80 (0.45)	0.60 (0.50)	0.60 (0.88)	0.75 (0.89)	1.00 (1.15)	0.00 (0.00)
Depression	0.00 (0.00)	0.20 (0.45)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.05 (0.22)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Cognitive-Loss	2.60 (2.70)	3.00 (3.67)	2.60 (3.21)	1.40 (3.13)	2.20 (2.95)	2.80 (1.92)	2.70 (2.34)	2.30 (3.25)	3.13 (3.36)	7.00 (0.82)	7.75 (1.50)
Fatigue	2.00 (3.94)	0.60 (1.34)	0.60 (1.34)	0.80 (1.79)	1.80 (2.49)	4.80 (2.77)	3.40 (3.41)	0.95 (1.80)	0.88 (1.64)	0.00 (0.00)	0.00 (0.00)
Guilt-Shame	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Friendly	9.40 (0.89)	9.00 (6.16)	6.80 (6.69)	3.40 (3.51)	5.20 (4.87)	6.40 (4.39)	7.90 (3.17)	6.10 (5.45)	10.63 (1.55)	11.75 (3.59)	13.25 (0.96)
Carefree	7.40 (6.77)	13.60 (9.07)	9.40 (8.85)	3.80 (6.87)	9.40 (9.79)	8.40 (7.77)	7.90 (7.29)	9.05 (8.71)	14.38 (8.67)	19.75 (4.11)	21.25 (3.77)

TABLE XVII j

STUDY II: Subject #9H

MEANS AND STANDARD DEVIATIONS FOR MOOD ASSESSMENT SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
(B) NON-SMOKING AND SMOKING PERIODS; (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

	(A) Marihuana Smoking Period Quarter				(B)		(C)	
	Pre- Drug	1st	2nd	3rd	4th	Post- Drug	Pre & Post Drug Period	Marihuana-Related Special Daily Before After
Anxiety	0.20 (0.45)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.10 0.00 (0.32) (0.00)	0.00 0.00 (0.00) (0.00)
Hostility	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.40 (0.89)	0.20 0.00 (0.63) (0.00)	0.00 0.00 (0.00) (0.00)
Depression	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 0.00 (0.00) (0.00)	0.00 0.00 (0.00) (0.00)
Cognitive-Loss	5.40 (1.34)	6.00 (0.71)	5.40 (1.34)	5.40 (1.34)	5.50 (1.00)	5.20 (1.79)	5.30 5.58 (1.58) (1.13)	5.40 3.67 (1.34) (0.58)
Fatigue	3.20 (2.95)	0.60 (1.34)	0.00 (0.00)	0.40 (0.89)	0.00 (0.00)	0.40 (0.89)	1.80 0.25 (2.18) (0.80)	0.60 2.00 (1.34) (2.00)
Guilt-Shame	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 0.00 (0.00) (0.00)	0.00 0.00 (0.00) (0.00)
Friendly	12.80 (1.79)	9.60 (2.70)	10.00 (2.00)	10.00 (2.35)	10.00 (2.45)	10.40 (3.05)	11.60 9.90 (2.50) (2.39)	9.60 8.33 (2.07) (3.21)
Carefree	16.60 (4.34)	14.40 (3.21)	14.40 (4.04)	14.20 (1.79)	14.50 (1.00)	14.00 (2.24)	15.30 14.38 (3.45) (2.78)	13.00 12.33 (2.74) (1.53)

TABLE XVII k

STUDY II: Subject #10H

MEANS AND STANDARD DEVIATIONS FOR MOOD ASSESSMENT SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
(B) NON-SMOKING AND SMOKING PERIODS; (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

(A)										(B)		(C)	
Pre-Drug		Marihuana Smoking Period Quarter				Post-Drug	Pre & Post Drug		Marihuana-Related Special				
		1st	2nd	3rd	4th		Drug	Period	Daily	Before After			
Anxiety	3.00 (1.22)	1.80 (0.45)	3.00 (1.00)	2.00 (0.00)	3.60 (1.34)	5.00 (2.83)	4.00 (2.18)	2.60 (0.87)	2.75 (1.71)	5.25 (4.03)	2.00 (1.63)		
	1.40 (0.89)	1.80 (0.84)	3.00 (1.41)	1.80 (1.10)	2.60 (2.51)	2.20 (0.84)	1.80 (0.86)	2.30 (1.60)	1.75 (0.96)	6.00 (4.83)	1.00 (0.82)		
Depression	2.20 (1.30)	1.80 (1.30)	3.20 (2.49)	0.80 (0.84)	1.60 (3.05)	1.60 (1.52)	1.90 (1.41)	1.85 (2.12)	0.75 (0.96)	4.00 (6.06)	1.50 (1.29)		
	3.80 (0.45)	5.20 (0.45)	3.80 (0.84)	5.20 (0.84)	3.40 (1.67)	4.40 (2.30)	4.10 (1.66)	4.40 (1.05)	4.75 (0.50)	5.50 (1.29)	4.00 (0.82)		
Fatigue	3.20 (1.48)	4.00 (1.73)	2.80 (1.92)	1.20 (0.84)	2.00 (1.41)	2.40 (2.19)	2.80 (1.87)	2.50 (1.53)	2.50 (1.91)	3.25 (2.99)	2.00 (1.83)		
	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.25 (0.50)	0.00 (0.00)		
Guilt-Shame	6.20 (1.10)	7.00 (1.00)	7.00 (1.22)	9.00 (1.22)	5.60 (2.70)	7.80 (2.49)	7.00 (1.92)	7.15 (1.68)	8.00 (0.82)	6.25 (2.87)	9.25 (2.99)		
	9.20 (1.92)	10.00 (1.00)	9.60 (3.71)	13.00 (1.58)	8.60 (5.03)	10.40 (4.10)	9.80 (3.20)	10.30 (3.26)	12.25 (2.22)	13.25 (3.69)	13.50 (4.12)		

TABLE XVIII B

STUDY I: Casual Users

MEANS AND STANDARD DEVIATIONS FOR PERFORMANCE SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
 (B) NON SMOKING AND SMOKING PERIODS. (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

(A)

(B)

(C)

Digit Span	Pre-Drug	Marihuana Smoking Period Quarter				Post-Drug	Pre & Post Drug		Drug Period		Marihuana Related	
		1st	2nd	3rd	4th		Drug	Drug	Period	Period	Daily	Special
Forward	7.68 (1.06)	7.39 (1.67)	8.36 (0.84)	8.22 (0.67)	8.44 (0.73)	8.18 (0.84)	7.93 (0.96)	7.93 (0.96)	8.10 (1.06)	8.10 (1.06)	7.39 (1.79)	7.88 (0.69)
Backward	7.16 (1.05)	6.98 (1.58)	7.78 (0.90)	7.52 (1.21)	8.00 (0.89)	8.04 (0.71)	7.60 (0.90)	7.60 (0.90)	7.57 (1.18)	7.57 (1.18)	7.08 (1.71)	7.31 (1.20)
Time Estimation												
10 Sec Points	9.88 (1.30)	9.81 (1.70)	9.68 (1.79)	9.53 (1.32)	10.30 (2.56)	10.26 (1.10)	10.07 (1.20)	10.07 (1.20)	9.83 (1.90)	9.83 (1.90)	10.23 (2.72)	9.48 (1.00)
60 Sec.	61.00 (6.24)	61.00 (8.42)	63.11 (5.87)	63.89 (5.35)	64.82 (6.46)	67.42 (6.78)	64.21 (6.52)	64.21 (6.52)	63.25 (6.63)	63.25 (6.63)	58.52 (5.66)	58.02 (7.58)
90 Sec.	91.22 (8.41)	89.17 (10.56)	93.92 (8.35)	93.60 (6.96)	96.62 (5.37)	98.21 (9.60)	94.76 (9.02)	94.76 (9.02)	93.33 (8.04)	93.33 (8.04)	88.00 (6.80)	85.33 (14.35)
180 Sec.	180.70 (19.92)	180.38 (24.99)	182.24 (19.03)	182.54 (16.00)	190.62 (11.65)	195.99 (23.60)	188.25 (21.84)	188.25 (21.84)	183.95 (18.56)	183.95 (18.56)	171.17 (13.37)	164.02 (27.57)
Shooting Gallery												
Points	4275 (1344)	4681 (1457)	4944 (1212)	4580 (1232)	5249 (1362)	5133 (1392)	4704 (1368)	4704 (1368)	4864 (1320)	4864 (1320)	4817 (1408)	5263 (1172)

TABLE XVIII b

STUDY I: Subject #1C

MEANS AND STANDARD DEVIATIONS FOR PERFORMANCE SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
 (B) NON SMOKING AND SMOKING PERIODS: (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

(B)

(A)

Digit Span	Pre-Drug	Marihuana Smoking Period Quarter				Post-Drug	Pre & Post Drug		Marihuana Related	
		1st	2nd	3rd	4th		Drug	Period	Daily	Special
Forward	8.80 (0.45)	7.20 (2.95)	9.00 (0.00)	9.00 (0.00)	9.00 (0.00)	8.80 (0.45)	8.80 (0.45)	8.55 (1.47)	8.43 (1.87)	9.00 (0.00)
Backward	8.40 (0.89)	7.60 (3.13)	8.60 (0.55)	8.40 (0.89)	9.00 (0.00)	9.00 (0.00)	8.70 (0.63)	8.40 (1.65)	8.21 (1.89)	8.75 (0.50)
Time Estimation										
10 Sec Points	11.33 (2.02)	11.26 (2.21)	11.68 (1.22)	10.02 (0.40)	9.72 (1.76)	9.88 (0.56)	10.61 (1.48)	10.67 (1.55)	10.64 (1.64)	10.40 (1.77)
60 Sec.	68.67 (4.16)	65.20 (3.09)	70.42 (7.27)	64.26 (3.84)	67.86 (10.90)	68.89 (7.31)	68.78 (5.95)	66.94 (7.00)	66.58 (6.93)	60.28 (14.07)
90 Sec.	94.67 (7.64)	100.12 (5.06)	102.88 (11.17)	94.50 (6.75)	95.32 (8.02)	91.22 (7.50)	92.95 (7.57)	98.21 (8.07)	95.81 (7.43)	89.83 (16.99)
180 Sec.	187.83 (14.44)	199.06 (27.31)	187.52 (10.97)	179.70 (17.87)	195.32 (7.46)	183.36 (10.92)	185.60 (12.80)	190.40 (17.62)	189.01 (20.39)	178.88 (36.33)
Shooting Gallery										
Points	6180 (1619)	5060 (1893)	5780 (1588)	6280 (1818)	6680 (2165)	7700 (265)	6940 (1160)	6200 (1877)	6450 (1735)	6667 (1704)

TABLE XVIII C

STUDY I: Subject #2C

MEANS AND STANDARD DEVIATIONS FOR PERFORMANCE SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
 (B) NON SMOKING AND SMOKING PERIODS: (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS
 (A) (B) (C)

Digit Span	Pre-Drug	Marihuana Smoking Period Quarter				Post-Drug	Pre & Post Drug		Marihuana Related	
		1st	2nd	3rd	4th		Drug	Period	Daily	Special
Forward	6.80 (1.10)	8.00 (1.22)	9.00 (0.00)	8.20 (0.84)	8.20 (0.84)	7.80 (0.84)	7.30 (0.98)	8.350 (0.85)	6.0 (0.00)	
Backward	5.60 (0.89)	6.80 (0.84)	7.60 (0.89)	7.60 (1.14)	7.80 (0.84)	7.80 (0.45)	6.70 (0.71)	7.450 (0.94)	6.0 (0.00)	
Time Estimation										
10 Sec Points	9.00 (1.80)	8.40 (1.19)	9.16 (1.25)	9.80 (1.84)	9.82 (1.02)	10.28 (1.06)	9.64 (1.48)	9.30 (1.36)	8.00 (0.00)	
60 Sec.	49.83 (6.51)	50.78 (9.81)	59.60 (6.94)	62.72 (1.91)	65.42 (2.66)	67.82 (2.74)	58.83 (4.99)	59.630 (6.23)	44.00 (0.00)	
90 Sec.	80.83 (10.25)	70.58 (12.36)	85.56 (11.45)	89.46 (9.48)	95.42 (2.90)	96.76 (5.95)	88.795 (8.38)	85.255 (9.77)	58.50 (0.00)	
180 Sec.	144.33 (21.36)	162.38 (28.00)	182.12 (20.92)	166.82 (25.90)	180.46 (18.34)	198.96 (16.72)	171.645 (19.18)	172.945 (23.61)	116.00 (0.00)	
Shooting Gallery										
Points	3310 (887)	4620 (1331)	3900 (797)	3000 (430)	3965 (2279)	5972 (1420)	4641 (1184)	3871 (1395)	4000 (000.0)	6400 (000.0)

TABLE XVIII d

STUDY I: Subject #3C

MEANS AND STANDARD DEVIATIONS FOR PERFORMANCE SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
 (B) NON SMOKING AND SMOKING PERIODS. (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

(C)

(B)

(A)

Digit Span	Pre-Drug	Marihuana Smoking Period				Post-Drug	Pre & Post Drug		Drug Period		Marihuana Related	
		1st	2nd	3rd	4th		Drug	Drug	Period	Period	Daily	Special
Forward	5.80 (1.10)	7.20 (0.84)	8.40 (0.89)	7.00 (0.71)	8.80 (0.45)	7.00 (1.59)	6.40 (1.37)		7.85 (0.74)		7.81 (1.05)	8.33 (0.58)
Backward	5.40 (1.52)	6.00 (1.41)	7.00 (1.00)	6.20 (1.79)	7.20 (0.45)	6.00 (1.00)	5.70 (1.29)		6.60 (1.26)		6.56 (1.36)	7.67 (1.53)
Time Estimation												
10 Sec Points	8.50 (0.50)	9.08 (0.65)	10.08 (0.76)	10.28 (0.76)	10.52 (0.64)	10.08 (0.93)	9.29 (0.75)		9.99 (0.70)		10.03 (0.81)	10.53 (0.87)
60 Sec.	54.50 (2.0)	55.60 (5.22)	61.90 (5.16)	64.18 (3.03)	67.52 (11.64)	67.82 (3.92)	61.16 (3.11)		62.30 (7.05)		62.33 (8.47)	61.70 (7.83)
90 Sec.	86.67 (4.25)	80.76 (11.05)	95.22 (4.77)	99.38 (2.64)	97.60 (3.90)	99.42 (5.64)	93.05 (4.99)		93.24 (6.46)		93.78 (9.75)	89.03 (10.72)
180 Sec.	176.83 (13.42)	167.06 (18.37)	185.10 (15.30)	181.84 (27.49)	189.52 (15.99)	194.28 (9.38)	185.56 (11.58)		180.88 (19.89)		178.85 (21.30)	174.83 (11.25)
Shooting Gallery												
Points	5160 (1732)	3900 (612)	3520 (550)	3220 (278)	3100 (485)	3220 (526)	4190 (1280)		3435 (497)		3344 (403)	3275 (299)

TABLE XVIII e

STUDY I: Subject #4C

MEANS AND STANDARD DEVIATIONS FOR PERFORMANCE SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
 (B) NON SMOKING AND SMOKING PERIODS. (C) DAILY AND SPECIAL, MARIHUANA RELATED ASSESSMENTS
 (A) (B) (C)

Digit Span	Pre-Drug	Marihuana Smoking Period Quarter				Post-Drug	Pre & Post Drug		Drug Period		Marihuana Related	
		1st	2nd	3rd	4th						Daily	Special
Forward	7.40 (1.14)	8.60 (0.55)	8.40 (1.34)	8.80 (0.45)	8.40 (0.89)	9.00 (0.00)	8.20 (0.81)	8.55 (0.88)	8.67 (0.52)	8.33 (0.58)		
Backward	8.20 (1.30)	7.40 (0.55)	8.40 (0.55)	8.00 (0.71)	8.60 (0.55)	8.80 (0.45)	8.50 (0.97)	8.10 (0.59)	8.67 (0.52)	8.00 (1.00)		
Time Estimation												
10 Sec Points	10.00 (1.80)	9.48 (1.59)	11.68 (5.28)	10.52 (2.44)	14.66 (6.85)	10.78 (1.33)	10.39 (1.58)	11.59 (4.56)	12.93 (6.98)	10.60 (0.26)		
60 Sec.	61.83 (4.31)	56.50 (9.19)	66.72 (4.76)	65.32 (6.12)	63.66 (4.62)	66.82 (3.81)	64.33 (4.07)	63.05 (6.44)	63.72 (6.57)	62.20 (5.37)		
90 Sec.	93.50 (6.54)	83.58 (13.45)	91.76 (6.55)	91.72 (5.25)	96.86 (6.58)	98.92 (6.83)	96.21 (6.89)	90.98 (8.58)	92.97 (8.90)	88.10 (11.74)		
180 Sec.	161.33 (1.04)	162.22 (34.16)	185.60 (8.01)	183.32 (15.25)	193.98 (6.79)	179.52 (21.55)	170.425 (15.26)	181.280 (19.47)	186.72 (15.89)	178.60 (13.34)		
Shooting Gallery												
Points	6280 (2280)	5840 (2317)	6520 (1675)	5580 (1305)	8040 (747)	6220 (1855)	6250 (2078)	6495 (1615)	7217 (1419)	5650 (1821)		

TABLE XVIII f

STUDY I: Subject #5C

MEANS AND STANDARD DEVIATIONS FOR PERFORMANCE SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
 (B) NON SMOKING AND SMOKING PERIODS. (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS
 (A) (B) (C)

Digit Span	Pre-Drug	Marihuana Smoking Period Quarter				Post-Drug	Pre & Post Drug			Marihuana Related	
		1st	2nd	3rd	4th		Drug	Period	Drug	Daily	Special
Forward	8.20 (1.10)	8.20 (0.84)	8.20 (1.10)	8.40 (0.55)	8.20 (0.84)	8.40 (0.55)	8.30 (0.87)	8.25 (0.85)	8.00 (0.00)	8.00 (0.00)	7.00 (0.00)
Backward	7.00 (1.22)	8.00 (0.71)	6.80 (0.45)	7.20 (0.84)	7.40 (1.67)	8.20 (0.45)	7.60 (0.92)	7.35 (1.02)	8.00 (0.00)	8.00 (0.00)	8.00 (0.00)
Time Estimation											
10 Sec Points	11.50 (0.50)	9.42 (0.66)	8.12 (0.39)	8.62 (1.15)	9.20 (0.48)	10.26 (1.21)	10.88 (0.93)	8.84 (0.73)	9.50 (0.00)	8.00 (0.00)	
60 Sec.	60.00 (6.50)	65.62 (15.07)	65.22 (7.57)	68.62 (11.77)	63.88 (5.79)	71.28 (8.56)	65.640 (7.60)	65.835 (10.68)	49.00 (0.00)	49.00 (0.00)	
90 Sec.	94.00 (2.18)	80.42 (8.13)	93.26 (10.05)	95.72 (6.00)	94.78 (5.32)	99.29 (13.87)	96.64 (9.93)	91.05 (7.61)	79.00 (0.00)	75.30 (0.00)	
180 Sec.	192.33 (3.05)	157.58 (25.31)	181.06 (19.44)	180.48 (7.50)	181.00 (15.31)	178.68 (12.93)	185.51 (9.39)	175.03 (18.09)	141.50 (0.00)	128.50 (0.00)	
Shooting Gallery											
Points	1820 (539)	2528 (1501)	5540 (1638)	6040 (1890)	5640 (1504)	5300 (1633)	3560 (1216)	4937 (1641)	850 (0000)	4600 (0000)	

TABLE XVIII 9

STUDY I: Subject #6C

MEANS AND STANDARD DEVIATIONS FOR PERFORMANCE SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
 (B) NON SMOKING AND SMOKING PERIODS. (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS
 (A) (B) (C)

Digit Span	Pre-Drug	Marihuana Smoking Period Quarter			Post-Drug	Pre & Post Drug		Drug Period		Marihuana Related	
		1st	2nd	3rd	4th					Daily	Special
Forward	8.40 (0.89)	8.25 (0.50)	8.20 (0.84)	8.60 (0.55)	8.80 (0.45)	8.80 (0.45)	8.60 (0.70)	8.46 (0.60)	8.00 (0.00)	8.25 (0.96)	
Backward	8.40 (0.89)	8.75 (0.50)	8.80 (0.45)	8.20 (1.30)	8.80 (0.45)	8.60 (0.55)	8.50 (0.74)	8.64 (0.77)	6.00 (0.00)	7.25 (2.36)	
Time Estimation											
10 Sec Points	9.00 (1.32)	10.65 (3.18)	8.92 (0.64)	8.82 (0.63)	9.02 (0.40)	9.50 (0.94)	9.25 (1.15)	9.35 (1.66)	9.50 (0.00)	8.35 (0.42)	
60 Sec.	68.67 (8.69)	68.35 (6.98)	61.72 (3.85)	61.42 (3.64)	63.08 (3.41)	66.48 (8.23)	67.58 (8.46)	63.64 (4.70)	59.50 (0.00)	59.33 (1.08)	
90 Sec.	106.67 (10.75)	98.68 (12.55)	96.80 (6.93)	93.40 (2.72)	97.50 (4.09)	99.92 (17.05)	103.30 (14.25)	96.60 (7.58)	96.50 (0.00)	91.40 (2.11)	
180 Sec.	219.83 (38.76)	208.53 (22.56)	173.06 (36.63)	189.00 (7.90)	196.02 (4.44)	196.08 (13.22)	207.96 (28.96)	191.65 (21.98)	187.30 (0.00)	181.45 (4.77)	
Shooting Gallery											
Points	4620 (960)	5520 (1448)	4980 (1542)	5000 (1958)	4740 (1178)	3820 (349)	4220 (722)	5060 (1557)	6650 (2616)	4600 (2021)	

TABLE XVIII h

STUDY I: Subject #7C

MEANS AND STANDARD DEVIATIONS FOR PERFORMANCE SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
 (B) NON SMOKING AND SMOKING PERIODS. (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

Digit Span	Marihuana Smoking Period Quarter				Pre & Post Drug		Marihuana Related	
	Pre-Drug	1st	2nd	3rd	4th	Post Drug	Drug Period	Daily Special
Forward	8.00 (1.00)	6.20 (2.39)	8.00 (0.71)	7.80 (0.84)	8.00 (1.00)	8.40 (0.55)	7.50 (1.35)	6.89 (1.90) 7.00 (1.00)
Backward	6.60 (0.55)	7.25 (0.96)	8.00 (0.71)	7.20 (0.84)	8.20 (0.45)	8.60 (0.55)	7.66 (0.76)	8.00 (0.53) 7.33 (0.58)
Time Estimation								
10 Sec Points	12.00 (1.00)	9.96 (1.71)	9.02 (0.53)	9.56 (1.37)	10.82 (2.74)	11.04 (1.24)	9.84 (1.77)	10.12 (2.05) 10.87 (0.12)
60 Sec.	61.00 (3.97)	54.66 (8.16)	58.42 (5.79)	63.88 (3.45)	66.22 (6.09)	67.78 (2.47)	60.80 (6.11)	60.02 (10.07) 61.53 (10.23)
90 Sec.	77.67 (5.13)	85.20 (9.52)	82.22 (9.15)	95.12 (9.82)	94.96 (4.69)	98.72 (6.21)	89.38 (8.56)	87.33 (10.54) 86.47 (17.13)
180 Sec.	159.00 (37.40)	174.38 (29.55)	164.62 (7.64)	173.38 (15.23)	189.56 (10.60)	191.64 (18.59)	175.49 (17.86)	166.27 (15.53) 146.20 (20.89)
Shooting Gallery								
Points	5820 (1568)	6580 (1897)	7026 (1375)	5160 (1422)	5964 (1353)	4076 (2150)	6183 (1528)	6396 (1780) 7600 (424)

TABLE XVIII i

STUDY I: Subject #8C

MEANS AND STANDARD DEVIATIONS FOR PERFORMANCE SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
 (B) NON SMOKING AND SMOKING PERIODS. (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS
 (A) (B) (C)

Digit Span	Marihuana				Pre & Post Drug		Drug Period		Marihuana Related	
	Pre-Drug	Smoking Period	Quarter	4th	Post-Drug	Drug	Period	Drug	Daily	Special
Forward	7.60 (1.14)	6.20 (2.05)	7.80 (0.45)	8.60 (0.55)	8.00 (1.22)	7.80 (1.18)	7.70 (1.16)	7.69 (1.58)	7.69 (1.58)	8.25 (0.96)
Backward	7.60 (1.14)	5.80 (1.30)	7.00 (1.22)	8.40 (1.34)	8.20 (0.84)	7.90 (1.00)	7.10 (1.29)	7.31 (1.58)	7.31 (1.58)	7.00 (1.15)
Time Estimation										
10 Sec Points	9.17 (0.58)	10.14 (0.91)	10.02 (0.71)	10.08 (2.42)	10.58 (1.67)	9.88 (1.25)	9.92 (1.47)	9.83 (1.52)	9.83 (1.52)	9.35 (1.27)
60 Sec.	64.00 (1.00)	64.82 (4.97)	60.60 (3.49)	61.82 (3.16)	61.88 (11.58)	62.94 (8.22)	61.83 (3.869)	61.31 (4.23)	61.31 (4.23)	59.03 (8.05)
90 Sec.	95.17 (0.58)	99.66 (7.42)	94.76 (6.93)	96.78 (7.14)	94.64 (9.85)	94.91 (6.98)	95.37 (7.62)	94.60 (8.58)	94.60 (8.58)	81.58 (30.73)
180 Sec.	193.17 (6.21)	190.12 (19.99)	172.72 (25.28)	192.26 (6.91)	202.26 (6.31)	197.72 (6.26)	185.84 (17.02)	186.41 (15.09)	186.41 (15.09)	154.48 (65.44)
Shooting Gallery										
Points	3006 (431)	3480 (502)	3920 (370)	6800 (1502)	5560 (1747)	4283 (1272)	4605 (423)	4819 (1624)	4819 (1624)	6500 (1646)

TABLE XVIII j

STUDY I: Subject #9C

MEANS AND STANDARD DEVIATIONS FOR PERFORMANCE SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
 (B) NON SMOKING AND SMOKING PERIODS. (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS
 (A) (B) (C)

Digit Span	Pre-Drug	Marihuana Smoking Period Quarter				Post-Drug	Pre & Post		Drug Period		Marihuana Related	
		1st	2nd	3rd	4th		Drug	Drug	Period	Period	Daily	Special
Forward	7.60 (1.67)	5.80 (2.28)	8.00 (1.22)	8.60 (0.55)	8.20 (0.84)	7.60 (0.89)	7.60 (1.34)	7.60 (1.34)	7.65 (1.39)	7.65 (1.39)	5.00 (4.24)	7.25 (0.50)
Backward	7.60 (1.14)	6.20 (2.77)	7.60 (1.67)	7.80 (1.30)	7.60 (0.55)	7.20 (1.30)	7.40 (1.22)	7.40 (1.22)	7.30 (1.76)	7.30 (1.76)	5.00 (4.24)	7.75 (0.50)
Time Estimation												
10 Sec Points	9.50 (1.32)	10.42 (1.98)	9.72 (0.52)	9.42 (0.70)	9.62 (0.36)	10.48 (1.01)	9.99 (1.18)	9.99 (1.18)	9.80 (1.10)	9.80 (1.10)	11.50 (2.83)	9.03 (0.74)
60 Sec.	63.17 (8.37)	63.66 (8.47)	64.72 (5.01)	67.12 (1.68)	66.78 (5.23)	71.18 (7.71)	67.18 (8.05)	67.18 (8.05)	65.57 (5.634)	65.57 (5.634)	60.25 (2.47)	57.40 (6.97)
90 Sec.	90.17 (17.06)	92.12 (16.04)	101.86 (2.72)	95.98 (4.59)	101.38 (4.56)	100.92 (5.14)	95.95 (12.60)	95.95 (12.60)	97.84 (8.75)	97.84 (8.75)	93.50 (1.41)	87.40 (8.32)
180 Sec.	189.33 (10.20)	184.06 (21.66)	202.82 (10.43)	195.58 (8.57)	193.62 (6.01)	222.74 (37.98)	206.04 (27.81)	206.04 (27.81)	194.02 (13.11)	194.02 (13.11)	188.50 (4.24)	174.93 (21.29)
Shooting Gallery												
Points	2858 (1396)	3620 (415)	3470 (186)	3562 (453)	3558 (325)	3724 (671)	3291 (1095)	3291 (1095)	3553 (180)	3553 (180)	3630 (42)	3240 (281)

TABLE XVIII k

STUDY I: Subject #10C

MEANS AND STANDARD DEVIATIONS FOR PERFORMANCE SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
 (B) NON SMOKING AND SMOKING PERIODS. (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS
 (A) (B) (C)

Digit Span	Marihuana				Pre & Post Drug		Drug Period		Marihuana Related	
	Pre-Drug	Smoking Period	4th	Post-Drug	Drug	Drug	Period	Period	Daily	Special
Forward	8.20 (0.45)	8.20 8.60 (0.84) (0.55)	7.60 (0.89)	8.00 (0.71)	8.10 (0.59)		8.15 (0.79)			7.50 (0.71)
Backward	6.80 (0.45)	6.00 8.00 (1.00) (0.71)	7.40 (1.52)	8.00 (0.71)	7.40 (0.59)		7.10 (1.15)			5.00- (1.41)
Time Estimation										
10 Sec Points	8.83 (1.04)	9.32 8.42 (1.19) (0.73)	8.88 (1.34)	9.68 (0.65)	9.26 (0.87)		9.04 (0.99)			8.15 (1.63)
60 Sec.	58.33 (10.13)	64.78 61.82 (7.31) (7.15)	61.32 (6.49)	64.20 (5.31)	61.27 (8.09)		62.46 (6.36)			51.75 (3.18)
90 Sec.	92.83 (6.66)	100.56 94.88 (2.79) (9.36)	90.42 (8.66)	102.28 (10.35)	97.56 (8.70)		95.36 (6.86)			78.90 (1.27)
180 Sec.	183.00 (8.26)	198.38 187.76 (17.99) (15.47)	187.06 (9.17)	212.38 (49.49)	196.69 (35.48)		191.91 (14.65)			158.15 (4.45)
Shooting Gallery										
Points	3692 (801)	4666 4780 (1328) (1139)	3740 (230)	5740 (1633)	4716 (1286)		4297 (887)			4100 (608)

TABLE XIX a

STUDY II: Heavy Users

MEANS AND STANDARD DEVIATIONS FOR PERFORMANCE SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
 (B) NON SMOKING AND SMOKING PERIODS. (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

(A) (B) (C)

Digit Span	Pre-Drug	Marihuana Smoking Period Quarter			Post-Drug	Pre & Post Drug		Drug Period		Marihuana Related	
		1st	2nd	3rd		Drug	Drug	Period	Period	Daily	Special
Forward	7.15 (0.68)	7.66 (1.05)	7.86 (0.83)	8.22 (0.66)	8.47 (0.80)	7.81 (0.74)		8.04 (0.80)		7.59 (0.98)	7.75 (1.05)
Backward	6.67 (0.88)	7.04 (1.09)	7.88 (0.91)	8.18 (0.66)	8.25 (0.77)	7.46 (0.83)		7.80 (0.90)		7.08 (1.19)	7.34 (1.06)
Time Estimation											
10 Sec Points	11.13 (1.29)	10.03 (1.62)	10.93 (.97)	11.72 (1.18)	10.93 (.88)	11.03 (1.10)		11.07 (1.43)		10.35 (1.31)	10.78 (1.39)
60 Sec.	66.03 (10.44)	58.86 (13.86)	69.66 (5.87)	75.22 (8.58)	67.14 (13.24)	66.59 (11.92)		69.22 (10.51)		66.94 (14.22)	63.20 (10.14)
90 Sec.	95.98 (15.50)	83.72 (17.86)	100.35 (9.65)	105.96 (13.49)	102.93 (13.47)	89.85 (14.52)		98.54 (13.77)		93.66 (20.33)	95.97 (17.26)
180 Sec.	188.96 (28.92)	152.28 (26.04)	193.27 (20.46)	199.95 (22.79)	174.30 (52.93)	181.63 (42.65)		184.29 (27.80)		167.46 (32.94)	176.17 (30.62)
Shooting Gallery											
Points	2805 (698)	3610 (997)	3910 (916)	3810 (1037)	4549 (1243)	3677 (1008)		3857 (1024)		3582 (1109)	3620 (850)

TABLE XIX b

STUDY II: Subject #1H

MEANS AND STANDARD DEVIATIONS FOR PERFORMANCE SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
 (B) NON SMOKING AND SMOKING PERIODS. (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS
 (A) (B) (C)

Digit Span	Marihuana				Pre & Post		Drug		Marihuana Related	
	Pre-Drug	Smoking Period	Quarter	Post-Drug	Drug	Period	Drug	Period	Daily	Special
Forward	8.40 (0.55)	8.80 (0.45)	9.00 (0.00)	8.80 (0.45)	8.60 (0.50)	8.89 (0.34)	8.60 (0.50)	8.89 (0.34)	8.00 (0.00)	8.75 (0.50)
Backward	7.80 (0.45)	8.40 (0.89)	9.00 (0.00)	8.60 (0.55)	8.20 (0.50)	8.68 (0.58)	8.20 (0.50)	8.68 (0.58)	7.00 (0.00)	8.50 (0.58)
Time Estimation										
10 Sec Points	9.52 (1.55)	8.68 (1.15)	10.44 (0.61)	11.00 (2.12)	10.26 (0.37)	10.40 (1.33)	9.89 (1.21)	10.40 (1.33)	7.80 (0.00)	11.43 (1.50)
60 Sec.	59.54 (10.16)	58.36 (7.65)	74.14 (7.84)	74.15 (11.87)	71.04 (11.59)	69.69 (8.58)	65.29 (10.90)	69.69 (8.58)	59.70 (0.00)	68.78 (9.72)
90 Sec.	92.86 (15.14)	87.52 (16.74)	103.94 (6.20)	102.20 (7.33)	103.40 (15.10)	100.27 (11.06)	98.13 (15.12)	100.27 (11.06)	79.00 (0.00)	104.55 (9.03)
180 Sec.	168.46 (13.53)	148.26 (32.88)	196.36 (27.36)	170.85 (57.40)	178.84 (77.71)	182.40 (38.24)	173.65 (55.78)	182.40 (38.24)	133.60 (0.00)	173.45 (19.30)
Shooting Gallery										
Points	2490 (209)	2190 (322)	2550 (191)	2452 (179)	2208 (283)	2430 (258)	2349 (248)	2430 (258)	2000 (0.00)	2463 (119)

TABLE XIX c

STUDY II: Subject #2H

MEANS AND STANDARD DEVIATIONS FOR PERFORMANCE SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
 (B) NON SMOKING AND SMOKING PERIODS. (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS
 (A) (B) (C)

Digit Span	Pre-Drug	Marihuana Smoking Period Quarter				Post-Drug	Pre & Post			Marihuana Related	
		1st	2nd	3rd	4th		Drug	Drug	Period	Daily	Special
Forward	8.80 (0.45)	9.00 (0.00)	9.00 (0.00)	9.00 (0.00)	9.00 (0.00)	9.00 (0.00)	8.90 (0.32)	9.00 (0.00)			9.00 (0.00)
Backward	8.40 (0.55)	9.00 (0.00)	8.80 (0.45)	9.00 (0.00)	9.00 (0.00)	9.00 (0.00)	8.70 (0.39)	8.95 (0.23)			8.75 (0.50)
Time Estimation											
10 Sec Points	10.12 (1.50)	8.78 (1.28)	10.64 (0.40)	10.84 (0.21)	11.74 (0.86)	10.82 (0.20)	10.47 (1.07)	10.50 (0.80)			10.83 (1.25)
60 Sec.	59.67 (7.85)	55.76 (11.52)	65.80 (6.17)	63.02 (4.10)	64.48 (6.27)	59.86 (5.72)	59.77 (6.87)	62.27 (7.53)			63.35 (7.96)
90 Sec.	91.96 (18.71)	81.78 (15.32)	96.96 (6.94)	92.06 (6.01)	88.38 (10.45)	90.60 (6.15)	91.28 (13.93)	89.80 (10.35)			89.28 (7.37)
180 Sec.	186.46 (38.56)	153.34 (23.24)	173.68 (27.88)	183.34 (12.58)	177.90 (7.53)	181.22 (60.49)	183.84 (50.72)	172.07 (19.57)			177.05 (13.80)
Shooting Gallery											
Points	2064 (1186)	3200 (624)	3376 (543)	2950 (30)	3774 (376)	3260 (373)	2662 (879)	3325 (455)			3033 (128)

TABLE XIX d

STUDY II: Subject #3H

MEANS AND STANDARD DEVIATIONS FOR PERFORMANCE SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
 (B) NON SMOKING AND SMOKING PERIODS. (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS
 (A) (B) (C)

Digit Span	Pre-Drug	Marihuana Smoking Period Quarter				Post-Drug	Pre & Post Drug		Drug Period		Marihuana Related	
		1st	2nd	3rd	4th						Daily	Special
Forward	4.80 (1.10)	7.20 (1.64)	7.40 (1.52)	7.80 (0.45)	8.80 (0.45)	8.00 (1.00)	6.40 (1.05)		7.80 (1.16)		7.00 (1.12)	6.75 (1.26)
Backward	4.60 (0.55)	6.20 (1.30)	7.40 (1.14)	8.00 (1.00)	7.80 (0.84)	7.80 (1.64)	6.20 (1.22)		7.35 (1.08)		6.67 (0.87)	6.00 (0.82)
Time Estimation												
10 Sec Points	12.86 (1.69)	12.44 (2.17)	12.60 (0.76)	12.24 (0.78)	11.80 (0.97)	11.64 (0.69)	12.25 (1.29)		12.27 (1.31)		11.78 (0.96)	11.33 (2.08)
60 Sec.	74.70 (21.32)	59.28 (1.75)	69.78 (3.15)	75.18 (3.81)	76.16 (9.32)	74.36 (12.50)	74.53 (17.48)		70.10 (5.35)		67.23 (6.77)	66.60 (10.97)
90 Sec.	96.44 (14.75)	88.72 (8.16)	105.42 (7.21)	111.74 (9.46)	110.76 (7.49)	107.90 (18.04)	102.17 (16.48)		104.16 (8.13)		98.31 (10.41)	98.38 (27.76)
180 Sec.	203.76 (29.52)	166.94 (13.74)	203.78 (5.86)	220.16 (9.40)	220.42 (28.86)	200.40 (51.81)	202.08 (42.17)		202.83 (16.91)		193.30 (25.59)	207.08 (29.49)
Shooting Gallery												
Points	3198 (475)	3826 (565)	4560 (1365)	5580 (1714)	5700 (1943)	4800 (1533)	3999 (1135)		4916.500 (1491)		4778 (1578)	4300 (424)

TABLE XIX e

STUDY II: Subject #4H

MEANS AND STANDARD DEVIATIONS FOR PERFORMANCE SCORES DURING: (A) SUCCESSIVE 3-DAY INTERVALS;
 (B) NON SMOKING AND SMOKING PERIODS. (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

(B)

(A)

Digit Span	Pre-Drug	Marihuana Smoking Period Quarter			Post-Drug	Pre & Post Drug		Marihuana Related	
		1st	2nd	3rd		Drug	Period	Daily	Special
Forward	7.20 (0.84)	8.40 (0.89)	8.20 (0.84)	8.80 (0.45)	9.00 (0.00)	8.40 (0.55)	8.60 (0.71)	8.50 (0.80)	8.25 (0.96)
Backward	8.20 (0.84)	7.00 (1.87)	8.40 (0.89)	9.00 (0.00)	8.60 (0.55)	9.00 (0.00)	8.60 (0.59)	7.92 (1.51)	7.75 (1.26)
Time Estimation									
10 Sec Points	12.16 (0.71)	11.62 (3.05)	12.80 (1.30)	13.92 (1.77)	11.74 (1.04)	11.46 (1.40)	11.81 (0.73)	12.58 (2.20)	11.98 (2.23)
60 Sec.	86.88 (6.62)	70.04 (10.10)	86.46 (6.13)	91.90 (8.03)	80.98 (17.66)	72.18 (21.48)	79.53 (15.89)	80.59 (13.92)	77.08 (18.47)
90 Sec.	120.40 (13.28)	101.16 (12.98)	112.14 (22.94)	109.98 (21.47)	115.54 (8.50)	107.36 (14.08)	113.88 (13.69)	108.56 (15.82)	119.38 (35.70)
180 Sec.	224.04 (15.33)	187.80 (28.38)	218.68 (9.60)	211.74 (28.18)	208.50 (58.66)	156.24 (39.87)	190.14 (30.21)	195.72 (35.91)	221.08 (34.42)
Shooting Gallery									
Points	3154 (703)	4066 (1845)	5080 (1580)	4992 (1237)	5932 (1377)	6032 (1973)	4593 (1481)	4554 (1613)	4483 (1609)

TABLE XIX f

STUDY II: Subject #5H

MEANS AND STANDARD DEVIATIONS FOR PERFORMANCE SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
 (B) NON SMOKING AND SMOKING PERIODS. (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS
 (A) (B) (C)

Digit Span	Pre-Drug	Marihuana Smoking Period Quarter			Post-Drug	Pre & Post Drug		Marihuana Related	
		1st	2nd	3rd		Drug	Period	Daily	Special
Forward	7.80 (0.84)	7.00 (1.22)	8.00 (0.71)	8.40 (0.89)	8.50 (0.58)	8.15 (0.72)	8.05 (0.86)	7.89 (1.36)	8.50 (1.00)
Backward	6.80 (1.30)	8.00 (0.71)	8.00 (0.71)	8.60 (0.55)	8.50 (1.00)	7.65 (1.16)	8.20 (0.86)	8.00 (1.00)	7.25 (0.50)
Time Estimation									
10 Sec Points	13.10 (1.66)	12.04 (1.76)	11.12 (1.48)	12.32 (1.25)	11.30 (1.01)	12.20 (1.37)	11.95 (1.39)	12.13 (1.29)	11.35 (0.81)
60 Sec.	78.44 (4.93)	84.34 (33.03)	67.58 (1.97)	77.50 (7.77)	70.93 (14.97)	74.69 (11.15)	78.02 (19.19)	82.78 (26.39)	65.98 (7.24)
90 Sec.	113.98 (11.41)	101.36 (7.38)	102.50 (5.49)	115.98 (8.41)	117.38 (16.08)	115.68 (17.16)	107.77 (14.57)	113.01 (15.00)	100.48 (11.90)
180 Sec.	228.22 (17.70)	184.94 (23.79)	206.44 (9.29)	177.86 (27.33)	164.70 (63.93)	196.46 (46.91)	189.39 (34.41)	174.00 (29.41)	173.35 (13.06)
Shooting Gallery									
Points	1706 (496)	2066 (684)	2050 (596)	2370 (1207)	2440 (1374)	2073 (1033)	2054 (807)	1981 (784)	2395 (779)

TABLE XIX 9

STUDY II: Subject #6H

MEANS AND STANDARD DEVIATIONS FOR PERFORMANCE SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
 (B) NON SMOKING AND SMOKING PERIODS. (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

(A)

(B)

(C)

Digit Span	Pre-Drug	Marihuana Smoking Period Quarter				Post-Drug	Pre & Post Drug		Drug Period		Marihuana Related	
		1st	2nd	3rd	4th		Drug	Special	Drug	Period	Daily	Special
Forward	6.50 (0.58)	6.20 (0.84)	6.60 (0.89)	7.80 (0.84)	8.25 (0.50)	8.60 (0.89)	7.55 (0.75)		7.21 (0.78)		6.50 (1.07)	6.00 (0.82)
Backward	6.25 (1.50)	6.00 (1.00)	6.80 (0.84)	7.40 (0.55)	7.25 (1.26)	7.00 (0.71)	6.63 (1.17)		6.86 (0.95)		6.38 (1.30)	7.25 (1.71)
Time Estimation												
10 Sec Points	10.13 (0.39)	8.72 (1.06)	9.90 (0.77)	10.84 (1.79)	12.33 (2.25)	10.82 (1.27)	10.48 (0.94)		10.45 (1.58)		9.18 (1.10)	10.73 (1.00)
60 Sec.	59.93 (4.59)	44.02 (18.55)	67.96 (3.49)	79.18 (6.65)	69.73 (18.04)	71.26 (10.39)	65.60 (8.03)		65.22 (13.47)		56.55 (20.13)	62.53 (7.09)
90 Sec.	90.33 (4.66)	50.38 (43.98)	100.96 (6.12)	100.72 (24.73)	114.03 (12.02)	98.32 (12.04)	94.33 (9.13)		91.52 (26.11)		70.20 (43.27)	94.78 (12.12)
180 Sec.	188.03 (49.25)	78.60 (21.98)	199.22 (23.95)	227.76 (11.55)	210.78 (13.11)	175.88 (61.82)	181.96 (55.89)		179.09 (18.45)		142.44 (62.44)	181.10 (25.08)
Shooting Gallery												
Points	2378 (470)	2764 (269)	3112 (410)	3408 (244)	3262 (352)	3592 (740)	2985 (620)		3137 (326)		3019 (392)	3070 (409)

TABLE XIX h

STUDY II: Subject #7H

MEANS AND STANDARD DEVIATIONS FOR PERFORMANCE SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
 (B) NON SMOKING AND SMOKING PERIODS: (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS

(A)

(B)

(C)

Digit Span	Marihuana Smoking Period				Post-Drug	Pre & Post Drug		Marihuana Related	
	Pre-Drug	1st	2nd	3rd	4th			Daily	Special
Forward	6.40 (0.55)	7.40 (1.14)	7.40 (0.55)	7.60 (0.89)	8.00 (0.82)	8.00 (1.41)	7.20 (1.07)	7.25 (1.26)	7.00 (2.00)
Backward	5.40 (0.55)	5.00 (1.41)	7.80 (0.84)	7.60 (1.14)	8.00 (0.82)	8.40 (0.55)	6.90 (0.55)	5.25 (2.06)	6.67 (1.15)
Time Estimation									
10 Sec Points	9.50 (1.15)	9.98 (0.94)	10.26 (1.13)	10.82 (1.53)	10.30 (1.36)	10.82 (0.72)	10.16 (0.96)	9.60 (0.85)	9.80 (0.75)
60 Sec.	56.34 (5.60)	53.56 (4.95)	66.46 (4.24)	70.67 (14.20)	69.43 (7.93)	60.70 (11.95)	58.52 (9.33)	58.20 (10.11)	52.53 (6.53)
90 Sec.	77.68 (9.27)	79.84 (11.57)	98.34 (6.02)	97.92 (5.25)	102.90 (20.55)	96.84 (9.42)	87.26 (9.35)	82.98 (10.58)	83.33 (5.01)
180 Sec.	128.02 (15.24)	138.44 (25.50)	180.94 (22.87)	192.58 (17.68)	180.28 (25.08)	163.06 (43.34)	145.54 (32.49)	141.68 (32.60)	156.97 (48.47)
Shooting Gallery									
Points	2582 (720)	3488 (243)	3760 (769)	3132 (1019)	3046 (1248)	5380 (1992)	3981 (1498)	3055 (581)	3467.5 (740.7)

TABLE XIX i

STUDY II: Subject #8H

MEANS AND STANDARD DEVIATIONS FOR PERFORMANCE SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
 (B) NON SMOKING AND SMOKING PERIODS. (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS
 (A) (B) (C)

Digit Span	Pre-Drug	Marihuana Smoking Period Quarter				Post-Drug	Pre & Post Drug		Marihuana Related	
		1st	2nd	3rd	4th		Drug	Period	Daily	Special
Forward	6.00 (0.00)	6.60 (1.52)	7.60 (0.89)	7.00 (0.71)	6.80 (0.45)	8.40 (0.89)	7.20 (0.63)	7.00 (0.98)	6.44 (1.01)	7.00 (0.82)
Backward	5.00 (0.71)	5.60 (0.89)	6.40 (1.14)	6.40 (0.89)	6.40 (1.34)	7.20 (0.45)	6.10 (0.59)	6.20 (1.08)	6.22 (0.97)	6.75 (0.50)
Time Estimation										
10 Sec Points	11.94 (1.59)	9.48 (1.47)	10.26 (1.03)	11.94 (0.89)	13.10 (3.73)	10.58 (0.61)	11.26 (1.20)	11.20 (2.12)	10.31 (1.76)	9.50 (1.35)
60 Sec.	55.60 (16.80)	49.29 (8.13)	66.04 (7.74)	70.10 (8.69)	66.36 (7.18)	62.92 (8.31)	59.26 (13.25)	62.95 (7.95)	58.78 (12.87)	59.75 (11.83)
90 Sec.	86.24 (31.96)	78.48 (9.89)	90.00 (2.28)	99.88 (6.29)	102.38 (6.76)	101.10 (9.08)	93.67 (23.51)	92.69 (6.86)	89.60 (11.73)	84.63 (5.40)
180 Sec.	181.92 (47.18)	152.02 (21.86)	193.16 (21.17)	200.10 (19.81)	208.64 (22.74)	176.40 (43.00)	179.16 (45.14)	188.48 (21.42)	172.47 (29.37)	148.18 (22.47)
Shooting Gallery										
Points	4172 (398)	3702 (1128)	4030 (524)	3938 (499)	6004 (1468)	5320 (1230)	4746 (914)	4419 (994)	4350 (1346)	4572.5 (271.5)

TABLE XIX j

STUDY II: Subject #9H

MEANS AND STANDARD DEVIATIONS FOR PERFORMANCE SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
 (B) NON SMOKING AND SMOKING PERIODS. (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS
 (A) (B) (C)

Digit Span	Marihuana Smoking Period				Post-Drug		Pre & Post Drug		Marihuana Related	
	Pre-Drug	1st	2nd	3rd	4th	Drug	Drug	Period	Daily	Special
Forward	8.60 (0.55)	9.00 (0.00)	8.80 (0.45)	9.00 (0.00)	9.00 (0.00)	9.00 (0.00)	8.80 (0.39)	8.95 (0.23)	8.80 (0.45)	8.75 (0.50)
Backward	7.80 (0.45)	8.40 (0.55)	8.80 (0.45)	9.00 (0.00)	8.75 (0.50)	9.00 (0.00)	8.40 (0.32)	8.737 (0.43)	8.80 (0.45)	8.00 (1.41)
Time Estimation										
10 Sec Points	10.52 (0.48)	9.92 (1.05)	11.58 (0.93)	11.62 (0.71)	11.23 (0.45)	11.56 (0.96)	11.04 (0.76)	11.09 (0.82)	10.78 (0.91)	10.35 (1.12)
60 Sec.	62.72 (5.66)	59.96 (6.77)	65.96 (6.70)	80.56 (6.58)	76.60 (7.32)	66.12 (18.50)	64.42 (13.68)	70.77 (6.85)	71.44 (10.47)	59.88 (4.19)
90 Sec.	96.92 (5.51)	92.42 (6.54)	100.06 (9.18)	108.50 (10.83)	98.30 (3.00)	108.80 (13.13)	102.86 (10.07)	99.82 (7.96)	107.24 (10.84)	94.6 (5.69)
180 Sec.	187.02 (10.17)	172.44 (31.72)	194.92 (11.76)	185.84 (38.25)	176.33 (23.97)	180.75 (33.04)	183.89 (24.44)	182.38 (28.21)	192.40 (10.28)	157.85 (47.95)
Shooting Gallery										
Points	3170 (1245)	6840 (1913)	3660 (483)	3760 (416)	4780 (1690)	7700 (292)	5435 (904)	4760 (1315)	3763 (625)	4350 (1654.3)

TABLE XIX k

STUDY II: Subject #10H

MEANS AND STANDARD DEVIATIONS FOR PERFORMANCE SCORES DURING: (A) SUCCESSIVE 5-DAY INTERVALS;
 (B) NON SMOKING AND SMOKING PERIODS. (C) DAILY AND SPECIAL MARIHUANA RELATED ASSESSMENTS
 (A) (B) (C)

Digit Span	Pre-Drug	Marihuana Smoking Period Quarter			Post-Drug	Pre & Post Drug		Marihuana Related	
		1st	2nd	3rd		Drug	Period	Daily	Special
Forward	7.00 (0.71)	7.00 (1.22)	6.60 (1.14)	7.80 (1.10)	8.00 (1.00)	7.50 (0.87)	7.30 (1.19)	7.75 (0.96)	7.50 (1.30)
Backward	6.40 (1.14)	6.80 (1.10)	7.60 (1.52)	7.80 (0.84)	8.00 (1.00)	7.20 (1.17)	7.65 (1.06)	7.50 (1.29)	6.50 (1.30)
Time Estimation									
10 Sec Points	11.44 (1.25)	8.60 (1.02)	9.66 (0.74)	11.22 (0.98)	10.38 (1.72)	10.75 (1.07)	9.97 (1.17)	9.03 (1.44)	10.53 (0.93)
60 Sec.	66.46 (5.99)	54.00 (7.23)	66.42 (7.68)	72.00 (13.45)	70.80 (4.95)	64.24 (7.69)	65.81 (8.90)	67.20 (10.04)	55.53 (10.30)
90 Sec.	93.02 (11.88)	75.56 (13.31)	93.18 (8.53)	115.44 (15.76)	95.58 (5.74)	95.32 (14.49)	94.94 (11.52)	94.00 (29.94)	90.30 (20.58)
180 Sec.	193.62 (16.86)	140.04 (31.30)	165.50 (27.65)	185.98 (19.47)	174.72 (43.47)	179.56 (28.28)	166.56 (31.67)	161.53 (32.05)	165.55 (28.39)
Shooting Gallery									
Points	3132 (91)	3962 (439)	6920 (1439)	5520 (1794)	4220 (148)	3946 (707)	5156 (1173)	4738 (1632)	4065 (539)

Table XX

Group Means for Casual Users on
Cognitive and Motor Tests

Age	IQ	Tr B	Tr Total	Cat	TPT Total	Mem	Loc	Rhy	Dom Tap	N-Dom Tap	Sessions
23.8	122	51.0	72.2	35.4	5.4	6.3	5.0	27.1	52.8	41.9	1
---	---	40.7	57.9	13.2	4.5	6.9	5.8	27.4	52.1	45.9	2
---	---	42.9	58.2	4.7	3.2	7.3	6.7	28.7	49.6	45.4	3

Table XXI

Group Means for Heavy Users on
Cognitive and Motor Tests

Age	IQ	Tr B	Tr Total	Cat	TPT Total	Mem	Loc	Rhy	Dom Tap	N-Dom Tap	Sessions
21.8	117	58.3	83.7	27.1	6.5	6.1	3.6	27.8	53.8	46.8	1
---	---	51.2	73.3	13.3	5.5	6.8	4.6	28.1	55.4	49.1	2
---	---	52.6	68.2	6.7	3.9	6.9	5.6	28.0	54.4	49.5	3

Table XXII
Temporal Distribution of Marihuana
Smoking Occasions

	<u>Casual Users</u>		<u>Heavy Users</u>	
	N	%	N	%
Morning(8-12 a.m.)	121	19.06	182	15.37
Afternoon (12-6 p.m.)	233	36.69	390	32.95
Evening (6 p.m. - 8 a.m.)	281	44.25	612	51.68
Total*	635	100.00	1184	100.00

$$\chi^2 = 11.6, 2d.f., p < .01$$

* The total number of smoking occasions is less than the total number of marihuana cigarettes consumed. On some some smoking occasions subjects smoked more than one cigarette.

Table XXIII
Average size of Groups During
Marihuana Smoking Occasions

	Casual Users	Heavy Users
Number of Smoking Occasions	277	301
Average Number of Subjects Smoking	2.29	3.39
Average Number of Subjects in Group (Smokers plus non- smokers)	3.27	4.20

Table XXIV

Frequency of Communication in Groups of Casual
and Heavy Users During Marihuana Smoking Occasions

<u>Frequency of Communication</u>	<u>Groups of Casual Users</u>		<u>Groups of Heavy Users</u>	
	N	%	N	%
None	29	10.47	96	31.89
Little	76	27.44	108	35.88
Frequent	118	42.60	55	18.28
Constant	8	2.89	1	.33
Undetermined	46	16.60	41	13.62
Total	277	100.00	301	100.00

$$\chi^2 = 64.5, 4 \text{ d.f.}, p < .01$$

Table XXV

Activity Patterns of Groups of Casual and
Heavy Users During Marihuana Smoking Occasions

	<u>Groups of Casual Users</u>		<u>Groups of Heavy Users</u>	
	N	%	N	%
Watching Television	119	42.95	50	16.61
Listening to Stereo or Radio	15	5.42	135	44.85
Talking	60	21.66	80	26.58
Games	19	6.88	5	1.66
Group Discussion	11	3.97	8	2.66
Other	25	9.03	3	1.00
Undetermined	28	10.11	20	6.64
	277	100.00	301	100.00

Table XXVI
Rate, Quality, and Quantity
of Group Interaction: Casual Users

		Pre- Marihuana			Marihuana			Post - Marihuana		
Number of Groups Observed		6	6	6	6	6	6	6	6	6
Positive Reactions	mean %	33.7 (10.3)	29.3 (14.3)	46.8 (23.5)	21.5 (11.0)	22.2 (14.4)	22.7 (12.6)			
Personal Diagreement	mean %	14.0 (4.3)	6.8 (3.3)	9.2 (4.6)	8.5 (4.4)	6.8 (4.4)	6.5 (3.6)			
Attempted Answers	mean %	250.3 (76.9)	141.3 (68.4)	117.3 (58.8)	137.3 (70.6)	103.0 (67.1)	132.0 (73.0)			
Questions	mean %	27.5 (8.4)	28.8 (14.0)	26.2 (13.1)	27.2 (14.0)	21.5 (14.0)	19.0 (10.5)			
Total Output	mean %	325.5 (100.0)	206.0 (100.1)	199.5 (100.0)	194.5 (100.0)	153.5 (100.0)	180.2 (100.1)			
Rate of Interaction	mean	13.03	13.07	13.27	15.98	12.74	15.73			

Table XXVII
Rate, Quality, and Quantity of
Group Interaction: Heavy Users

		Pre- Marihuana		Marihuana		Post- Marihuana	
Number of Groups Observed		8		6		6	8
Positive Reactions	mean %	18.1 (13.2)		21.7 (24.5)		40.3 (31.3)	48.2 (26.0)
Personal Diagreement	mean %	2.1 (1.5)		1.3 (1.5)		1.8 (1.4)	2.4 (1.3)
Attempted Answers	mean %	100.9 (73.6)		56.3 (63.3)		72.8 (56.6)	114.2 (61.6)
Questions	mean %	15.9 (11.6)		9.0 (10.2)		13.3 (10.5)	20.5 (11.0)
Total Output	mean %	137.0 (100.0)		88.3 (100.0)		128.3 (99.7)	185.4 (100.0)
Rate of Interaction	mean	13.15		11.71		12.31	13.24

Table XXVIII

Average Number of Both Original Suggestions and
Questions for Competing Teams of Casual Users

<u>Study Period</u>	<u>Study Day</u>	<u>Original Suggestions</u>		<u>Questions</u>	
		<u>Team A</u>	<u>Team B</u>	<u>Team A</u>	<u>Team B</u>
Pre- Marihuana	5	12.3	11.3	7.3	6.0
Marihuana	8	10.3	11.7	6.0	6.3
	13	*	*	5.3	6.0
	20	7.7	10.6	12.6	5.0
Post Marihuana	28	0.0	0.0	22.3	21.8

* Data incomplete owing to apparatus failure.

Table XXIX

Average Number of Both Original Suggestions and
Questions for Competing Teams of Heavy Users

<u>Study Period</u>	<u>Study Day</u>	<u>Original Suggestions</u>		<u>Questions</u>	
		<u>Team A</u>	<u>Team B</u>	<u>Team A</u>	<u>Team B</u>
Pre- Marihuana	5	12.6	13.2	8.0	10.8
Marihuana	7	6.0	7.6	4.6	5.6
	14	8.6	6.2	5.8	5.8
	21	5.8	8.6	5.0	7.0
Post Marihuana	28	10.8	7.0	6.0	7.6

Table XXX

Means and Standard Deviations
of Risk-taking Strategy Scores:
Heavy Users (N= 10)

Study Period	Study Day	Strategy			
		Long Shots		Maximization of Gain	
		Mean	SD	Mean	SD
Pre Marihuana	3	7.60	2.84	7.20	3.19
Marihuana	6	5.86	2.49	6.70	1.79
	13	7.14	2.53	6.50	2.38
	20	3.33	2.48	5.80	2.93
Post Marihuana	28	7.88	2.91	7.40	2.87
F Trials		7.75	p. < .01	.99, N.S.	
F Quadratic Trend		5.66	p. < .05	.08, N.S.	

Appendix

Scores on Edwards Personal Preference Inventory

Casual		Heavy	
Autonomy	62.9%	Autonomy	63.7%
Change	58.3%	Change	58.3%
Affiliation	55.6%	Nurturance	56.9%
Nurturance	54.9%	Heterosexuality	54.6%
Introspection	54.6%	Affiliation	53.2%
Heterosexuality	53.6%	Introspection	51.3%
Succurance	52.7%	Succurance	51.2%
Achievement	49.7%	Exhibition	47.8%
Aggression	49.3%	Aggression	47.1%
Endurance	46.4%	Endurance	46.7%
Exhibition	45.0%	Abasement	46.2%
Deference	43.2%	Deference	45.7%
Order	41.8%	Order	44.9%
Dominance	39.1%	Achievement	44.5%
Abasement	38.9%	Dominance	37.3%

Marijuana Study

Admission Medical History

Date _____

Name _____ Admission Date _____ ID# _____

Address _____ Age _____ Sex _____ Marital Status _____

Color _____ Nationality _____

Informant _____ Reliability _____

Occupation _____

Patient's own account of why he smokes marijuana, including usual effect observed:

Last Smoked Marijuana: _____

Most Recent Quantity and Quality Smoked _____

Usual Quantity and Quality Smoked _____

Use of Other Drugs:

Tobacco _____

Alcohol _____

Prescribed Drugs _____

Other Drugs _____

Note whether above used with marijuana or separately _____

Past Medical History:

Childhood _____

Serious Illnesses _____

Hospitalizations _____

Surgery _____

Injuries _____

Name _____ ID # _____ Date _____

Social History

1. Birthplace _____

2. Residences _____

3. Residence at time of admission _____

How long _____

Occupation - usual _____

No. of jobs during past 3 years _____

Longest period on 1 job during past 3 years _____

5. Education _____

6. Marriage; Divorce; or Separation _____

7. Service _____

Discharge _____

Family History

Father _____

Mother _____

Siblings _____

Spouse _____

Children _____

History of alcoholism or drug-abuse in family _____

Diabetes _____

Hypertension _____

T.B. _____

Convulsions _____

Jaundice _____

Mental Illness _____

SYSTEMS REVIEW

Skin texture _____ Bruising _____

Sweating _____ Rash _____

Itching _____ Pigmentation _____

Bones and Joints:

Pain _____ Enlargement _____ Swelling _____

Deformity _____ Trauma _____

Nervous System:

Headache _____ Loss of consciousness _____

Trauma _____ History of fracture _____

Insomnia _____ Pain _____

Eyes:

Visual activity _____

Diplopia _____

Night blindness _____

Color blindness _____

Ears:

Pain _____ Tinnitus _____

Deafness _____ Discharge _____

Nose, Throat, Respiratory:

METABOLIC:

Present weight _____ Usual weight _____ Weight loss _____

Polyuria _____ Polydipsia _____

Excessive Sweating _____

Other _____

Table XXXI
SUBJECTS' FINANCIAL STATEMENT

Casual Users											
Credits	1C	2C	3C	4C	5C	6C	7C	8C	9C	10C	Total
Operant Points	304.69	311.32	307.72	311.52	298.53	313.81	315.89	311.75	305.26	312.77	\$3,093.27
Daily Participation	62.00	62.00	62.00	62.00	62.00	62.00	62.00	62.00	62.00	62.00	620.00
Performance Tasks	36.73	26.71	29.22	36.02	28.14	34.93	32.01	32.91	29.02	29.48	315.17
Group Tasks	5.55	1.00	1.20	2.40	2.30	6.50	1.60	2.50	8.15	3.35	34.55
Gross Earned	408.97	401.03	400.14	411.94	390.97	417.25	411.50	409.16	404.43	407.60	\$ 4,062.99
Debits											
Marihuana Purchased	138.00	18.00	124.00	90.00	8.00	56.00	75.00	126.00	36.00	38.00	709.00
Tobacco Purchased			20.00					12.00	14.00	10.00	56.00
Marihuana Returned	- 9.54	-4.46	-8.58	-3.89	-4.06	-10.64	-0.75	-2.35	-7.31	-5.56	-57.14
Total Expenditures	128.46	13.54	135.42	86.11	3.94	45.36	74.25	135.65	42.69	42.44	\$707.86
Balance (net earnings)	280.51	287.39	264.72	325.83	387.03	371.89	337.25	273.51	361.74	365.14	\$3,355.13
Heavy Users											
Credits	1H	2H	3H	4H	5H	6H	7H	8H	9H	10H	Totals
Operant Points	310.00	310.00	308.17	304.83	303.17	301.50	308.17	305.33	302.33	306.00	\$3,059.50
Daily Participation	58.00	62.00	62.00	62.00	60.00	58.00	60.00	62.00	60.00	62.00	606.00
Performance Tasks	29.92	36.11	26.98	30.23	25.93	24.42	27.63	27.31	35.21	30.19	293.93
Group Tasks	2.80	8.58	2.80	4.30	6.25	15.80	18.10	3.40	4.20	5.20	71.30
Gross Earned	400.72	416.56	399.95	401.36	395.35	399.72	413.90	398.04	401.74	403.39	\$4,030.73
Debits											
Marihuana Purchased	141.00	82.00	107.00	176.00	194.00	150.00	149.00	155.00	166.00	103.00	1,423.00
Tobacco Purchased			7.00		18.50	12.50	0.50	17.50	17.00		73.00
Marihuana Returned	-10.88	-21.51	-39.90	-33.46	-32.74	-25.25	-25.48	-30.73	-25.88	-36.00	-281.83
Total Expenditures	130.12	50.39	74.10	142.54	179.76	127.14	124.02	141.77	157.12	67.00	\$1,214.17
Balance (net earnings)	270.60	356.07	325.85	258.82	215.59	262.47	289.88	256.27	244.62	336.39	\$2,816.56

SYSTEMS REVIEW (cont'd)Cardiovascular:

Pain _____ Edema _____
 Dyspnea _____ Treatment _____
 Orthopnea _____

Gastrointestinal:

Tongue - soreness, color _____
 Anorexia _____ Nausea, vomiting _____
 Pain _____ Hematemesis _____
 Jaundice _____ Melena _____
 Hemorrhoids _____

G.U.:

Frequency _____ Hematuria _____
 Retention _____ Sterility _____
 Nocturia _____ Impotence _____
 V.D. _____
 Menses _____

Neuromuscular:

Pain _____ Paresthesias _____
 Strength _____ Tremor _____
 Wasting _____ Incoordination _____
 Twitching _____
 Numbness _____
 Convulsions _____ Fainting episodes _____
 Dizziness _____
 Memory loss while driving _____

MARIJUANA STUDY
MEDICAL DATA SUMMARY

PAGE# _____

Patient: _____

ID# _____

DATE						
STUDY DAY						
TIME						
OBSERVER						
BLD/UA						
WEIGHT						
TEMP °F						
BP-SIT						
BP-STND						
PR-SIT						
PR-STND						
FEV						
FEV ₁						
FOOD *						
MEDS						
NOTES						
2						
TIME						
OBSERV						
TEMP °F						
BP-SIT						
BP-STND						
PR-SIT						
PR-STND						
FOOD*						
MEDS						
NOTES						
3						
TIME						
OBSERV						
TEMP F						
BP-SIT						
BP-STND						
PR-SIT						
PR-STND						
FEV						
FEV ₁						
FOOD *						
MEDS						

Name: _____ # _____ Exam # _____ Date: _____

Interim Physical Examination

BP Sitting _____ BP Standing _____
PR Sitting _____ PR Standing _____

Eyes: Conjunctival _____ Sclerae _____
EOM _____ Nystagmus _____
Pupils _____ Fundi _____

Nose, Mouth, Throat _____

Neck: Jugulars _____ Carotids _____
Thyroid _____ Nodes _____

Chest _____

Heart: Rate _____ Rhythm _____ Gallop _____
Murmurs _____ Pulses _____

Abdomen: Liver _____ Spleen _____ Masses _____
Tenderness _____ Fluid _____ BS _____

Extremities: Edema _____ Cyanosis _____

Tremor: Fingers _____
(0 3) Arms _____
Legs _____

Skin: Sweating (0+3+) _____
Lesions _____

Neurologic:
Motor _____

Sensory: Touch _____ Pin Prick _____
Vibration _____ Position _____
Parasthesias _____

Cerebellar: Finger to Nose _____
Heel to Shin _____
Gait _____
Dysarthria _____

Cranial NN: _____

Reflexes: (0+4+) (2+ = NL) RT LT
Biceps _____
Triceps _____
Supinator _____
Knee _____
Ankle _____
Plantar _____

Comments: Note level of apparent intoxication

SUBS.# _____ EXAM# _____
 PHYSICAL EXAMINATION
 (Daily by Attending Physician)
 Date Admit. _____
 Unit No. _____
 Date _____
 Hour _____

Name _____

Sex _____ Age _____

Hospt. Day _____ Ward _____

Temp. _____ Pulse _____ Resp. _____ B.P. _____ Wt. _____

A. <u>General Behavior and Appearance.</u>	Yes	No	Don't Know	Remarks
1. Lying	_____	_____	_____	_____
2. Sitting	_____	_____	_____	_____
3. Standing quietly	_____	_____	_____	_____
4. Moving about room	_____	_____	_____	_____
5. Appropriate dress	_____	_____	_____	_____
6. Initiates spontaneous action	_____	_____	_____	_____
7. Bizarre motions	_____	_____	_____	_____
8. Compulsive acts	_____	_____	_____	_____
9. Paralytic phenomena	_____	_____	_____	_____
10. Anaesthetic phenomena	_____	_____	_____	_____
11. Facial expression: smiles	_____	_____	_____	_____
12. " " laughs	_____	_____	_____	_____
13. " " frowns	_____	_____	_____	_____
14. " " sad	_____	_____	_____	_____
15. " " variable	_____	_____	_____	_____
16. " " inappropriate	_____	_____	_____	_____
17. " " weeping	_____	_____	_____	_____
18. " " grimacing	_____	_____	_____	_____
19. Posture: bizarre	_____	_____	_____	_____
20. " exaggerated	_____	_____	_____	_____
21. Combative	_____	_____	_____	_____
22. State of awareness grossly normal	_____	_____	_____	_____

If answer is no, fill in the
 following summary of responses
 to stimuli.

	pin prick	deep pressure	loud noise	bright light	own name	simple question	complex question
a) no response	_____	_____	_____	_____	_____	_____	_____
b) disorganized restlessness	_____	_____	_____	_____	_____	_____	_____
c) organized avoidance	_____	_____	_____	_____	_____	_____	_____
d) attention to stimulus	_____	_____	_____	_____	_____	_____	_____
e) inappropriate verbal response	_____	_____	_____	_____	_____	_____	_____
f) appropriate verbal response	_____	_____	_____	_____	_____	_____	_____

(cont'd)

-2-

Mental Status Check List

B. Mood:

23. Listless	*---*---*---*---*	Energetic
24. Relaxed	*---*---*---*---*	Agitated
25. Depressed	*---*---*---*---*	Elated
26. Fearful	*---*---*---*---*	Confident
27. Anxious	*---*---*---*---*	Calm
28. Angry	*---*---*---*---*	Placid
29. Companionable	*---*---*---*---*	Aloof
30. Suspicious	*---*---*---*---*	Trusting
31. Lonesome	*---*---*---*---*	At home
32. Complaining	*---*---*---*---*	Grateful
33. Consistent	*---*---*---*---*	Labile
34. Appropriate	*---*---*---*---*	Inappropriate

C. Stream of talk:

35. Overtalkative	*---*---*---*---*	Mute
36. Rapid articulation	*---*---*---*---*	Slow articulation
37. Clear articulation	*---*---*---*---*	Dysarthria
38. Coherent, organized	*---*---*---*---*	Incoherent, disorganized
39. Original phraseology	*---*---*---*---*	Conventional phraseology (cliches)
40. Relevant to environmental input	*---*---*---*---*	Irrelevant to environmental input
41. Relevant to a topic or theme	*---*---*---*---*	Irrelevant to a topic or theme, circumstantial
42. Loud	*---*---*---*---*	Soft

	Yes	No	Don't Know	Remarks
43. Rhymes and plays with sounds	---	---	---	_____
44. Puns and jokes	---	---	---	_____
45. Neologisms	---	---	---	_____

D. Content:

46. General fears	---	---	---	_____
47. Specific phobias	---	---	---	_____
48. Obsessional fears	---	---	---	_____
49. Intrusive thoughts	---	---	---	_____
50. Feelings of unreality	---	---	---	_____
51. Preoccupation with guilt	---	---	---	_____
52. Exclusive preoccupations	---	---	---	_____
53. Doubts	---	---	---	_____
54. Lies	---	---	---	_____
55. Suicidal wish	---	---	---	_____
56. Bodily complaints	---	---	---	_____
57. Fear of sexual accompanying anxiety	---	---	---	_____

	Yes	No	Don't Know	Remarks
58. Delusions: Somatic				
59. " Persecution				
60. " Guilt				
61. " Megalomaniac				
ideas of importance				
62. Delusions: Passivity				
ideas of influence				
63. Delusions: Catastrophe				
64. " Jealousy				
65. Ideas of Reference				
66. Hallucinations: Visual				
67. " Audit. voices				
68. " Audit. other				
69. " Touch				
70. " Smell, taste, other				
71. Illusions				
72. Highly systematized delusions			*-----*	* Poorly organized delusion
73. Highly stable delusions			*-----*	* Variable delusions
74. Highly organized hallucinations			*-----*	* Poorly organized hallucinations
E. Orientation:				
	None	Approx.	Perfect	Remarks
75. Knowledge of own name	Q			
76. Knowledge of day & date				
77. Knowledge of season				
78. Knowledge of place				
79. Finds way to room and lavatory				
F. Memory:				
80. Makes consistent factual statements				
81. Remembers specific family events in remote past (more than one year)				
82. Remembers specific job or educational events in remote past				
83. Remembers in detail events of last 24 hours				
84. Recalls examiner's name				
	Yes	No	Don't Know	Remarks
85. Presence of selective lacunar amnesia				
86. Presence of amnesic aphasia				
87. Confabulations				
88. Awareness of memory deficit				
89. Confidence of success of recall				

Psychomotor Activity 0 = none, 1+ = minimal, 2+ = moderate, 3+ = severe

Tremor	Fine	Coarse
Fingers	_____	_____
Arms	_____	_____
Legs	_____	_____
Trunk	_____	_____

Seizures

Area	_____
Duration	_____
Sequelae	_____

Sweating 0 = none, 1+ = minimal, 2+ = moderate, 3+ = severe

Dehydration - on appearance: 0 = none, 1+ = minimal, 2+ = moderate, 3+ = severe

Check if normal or absence of abnormality; specify any abnormality.

Pupils: Dilated	_____	Unreactive	_____
Nystagmus	_____	Retrobulbar neuropathy	_____
Ocular palsies	_____		
Other cranial nerve defect	_____		

Motor system:

- Strength
- Wasting of legs
- Liver flap

Sensory system:	-Touch	Temp.	Position
	-Pain	Vibration	
	-Parasthesias	Type	Site

Cerebellar:	-	Finger - nose	Ataxia
		Heel - shin	"
		Gait	"
		Trunkal	"
		Dysarthria	

Reflexes:	-	0 to 4+	Rt.	Lt.
		Biceps		
		Triceps		
		Supinator		
		Abdominal		
		Cremasteric		
		Knee		
		Ankle		
		Plantar		

Skin:	-	Facial color	Purpura
		Icterus	Telangiectasia
		Eruptions	Spider angiomas
		Corkscrew hair + other signs of scurvy	

Skull:	-	Tenderness	Scalp lacerations
		Fracture	Scalp excoriations

Eyes:	-	Conjunctival injection	Color blindness
		Scleral icterus	

Mouth:	-	Breath Gums Tongue		
				-Tremor Papillae Redness Soreness
Neck:	-	Stiffness Jugulars Carotids Bruits		
Lungs:	-	Presence of infection or other pulmonary disease		Degree Site
Heart and Aorta:		-Tachycardia -Cardiomegaly -B.P. -Peripheral edema -Murmurs		
Peripheral vessels:		-Radial -Femoral -Paradoxus		D. Pedis P. Tibial
Abdomen:	-	Liver Spleen Ascites		Retching Vomiting
Urinary:	-	Infection	Type	Site
Genitalia:	-	Testicular size		
Rectum:	-	Masses Bleeding Hemorrhoids		
Extremities:	-	Color Clubbing Edema Gait tenderness		
Other Infection: Type _____ Site _____ Severity _____				
Status re: Level of inebriation:				
None _____ Mild _____ Moderate _____ Severe _____				

Fig. 1a

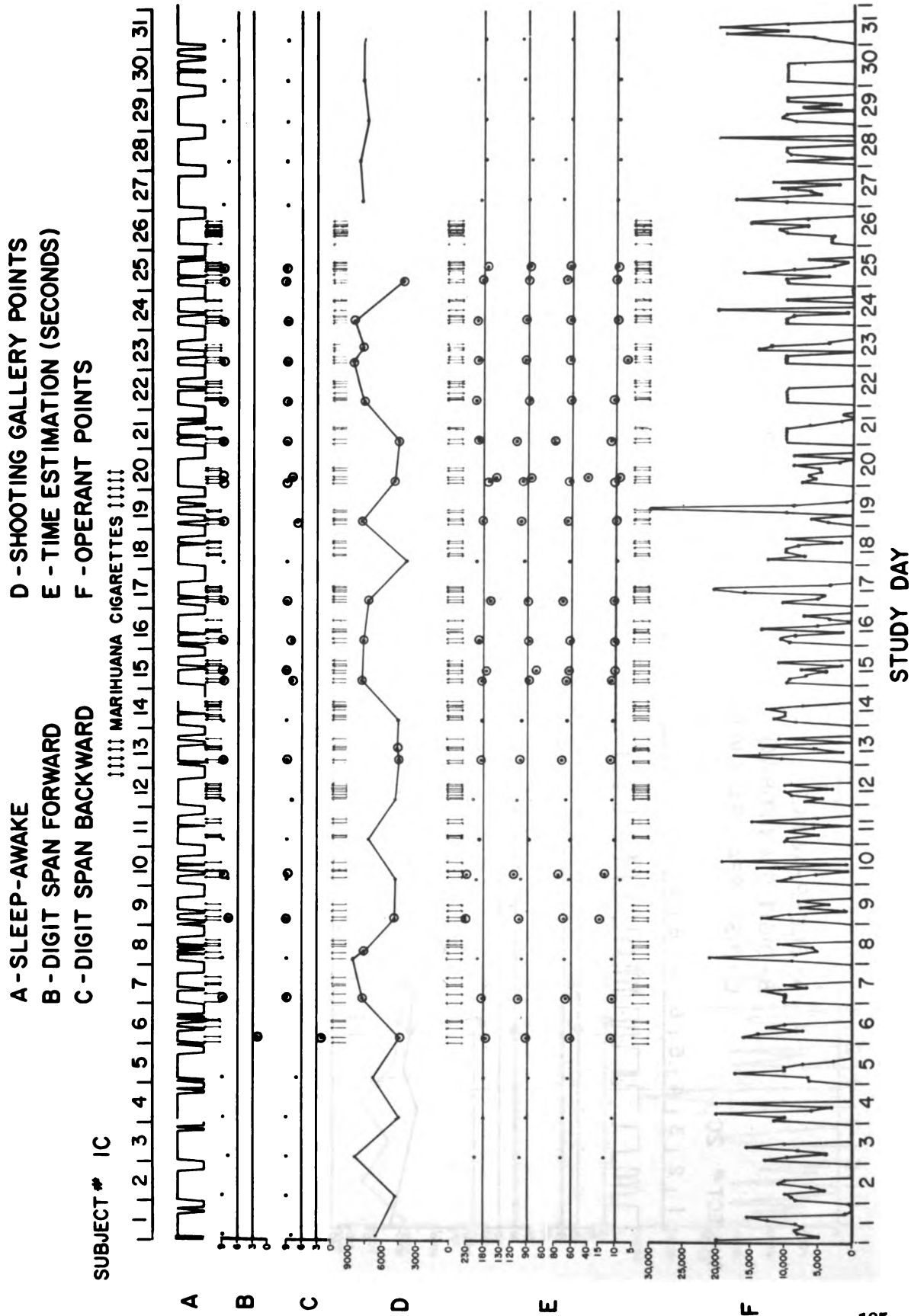


Fig. 2a

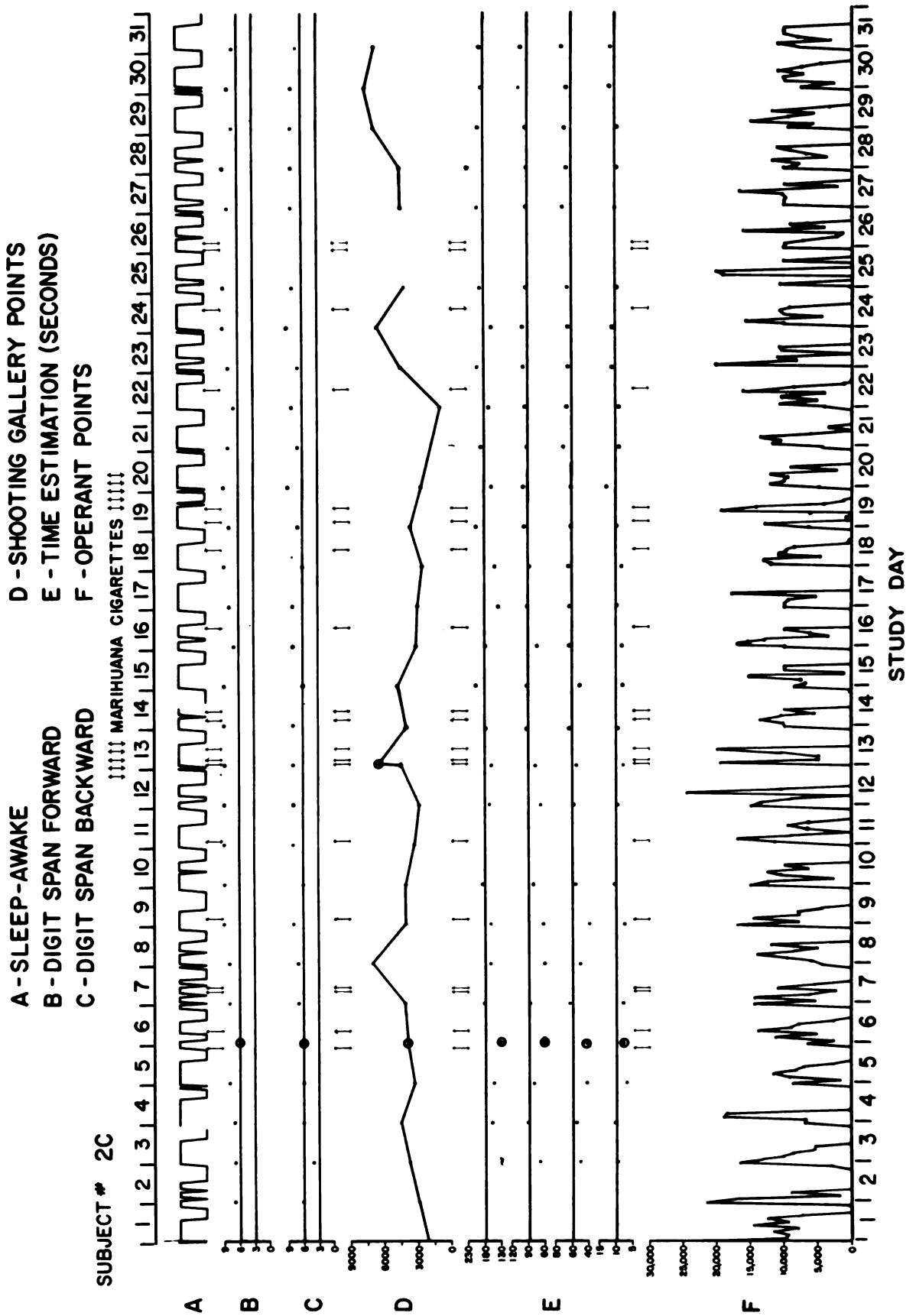


Fig. 3a

A - SLEEP-AWAKE
B - DIGIT SPAN FORWARD
C - DIGIT SPAN BACKWARD
D - SHOOTING GALLERY POINTS
E - TIME ESTIMATION (SECONDS)
F - OPERANT POINTS

SUBJECT # 3C

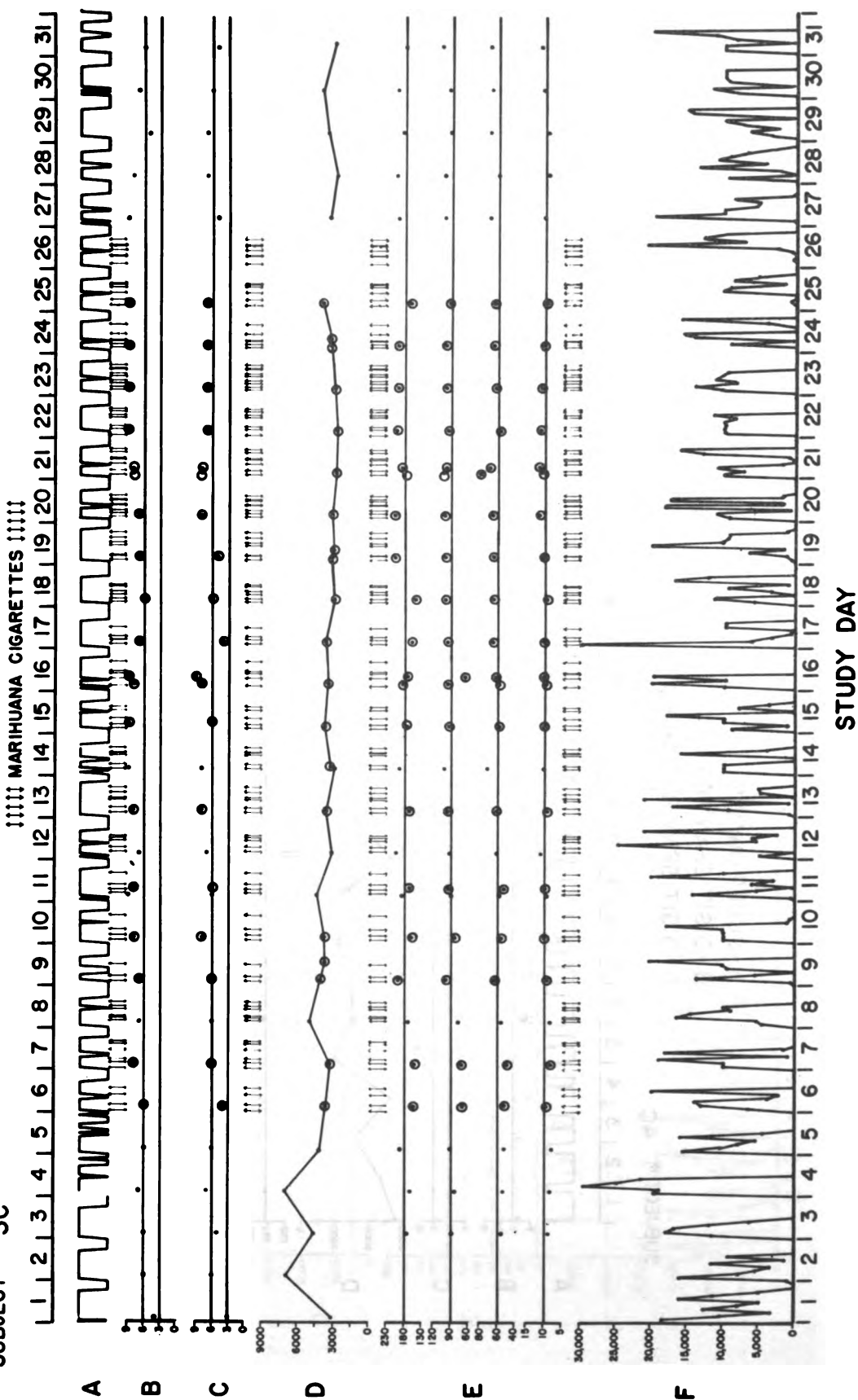


Fig. 4a

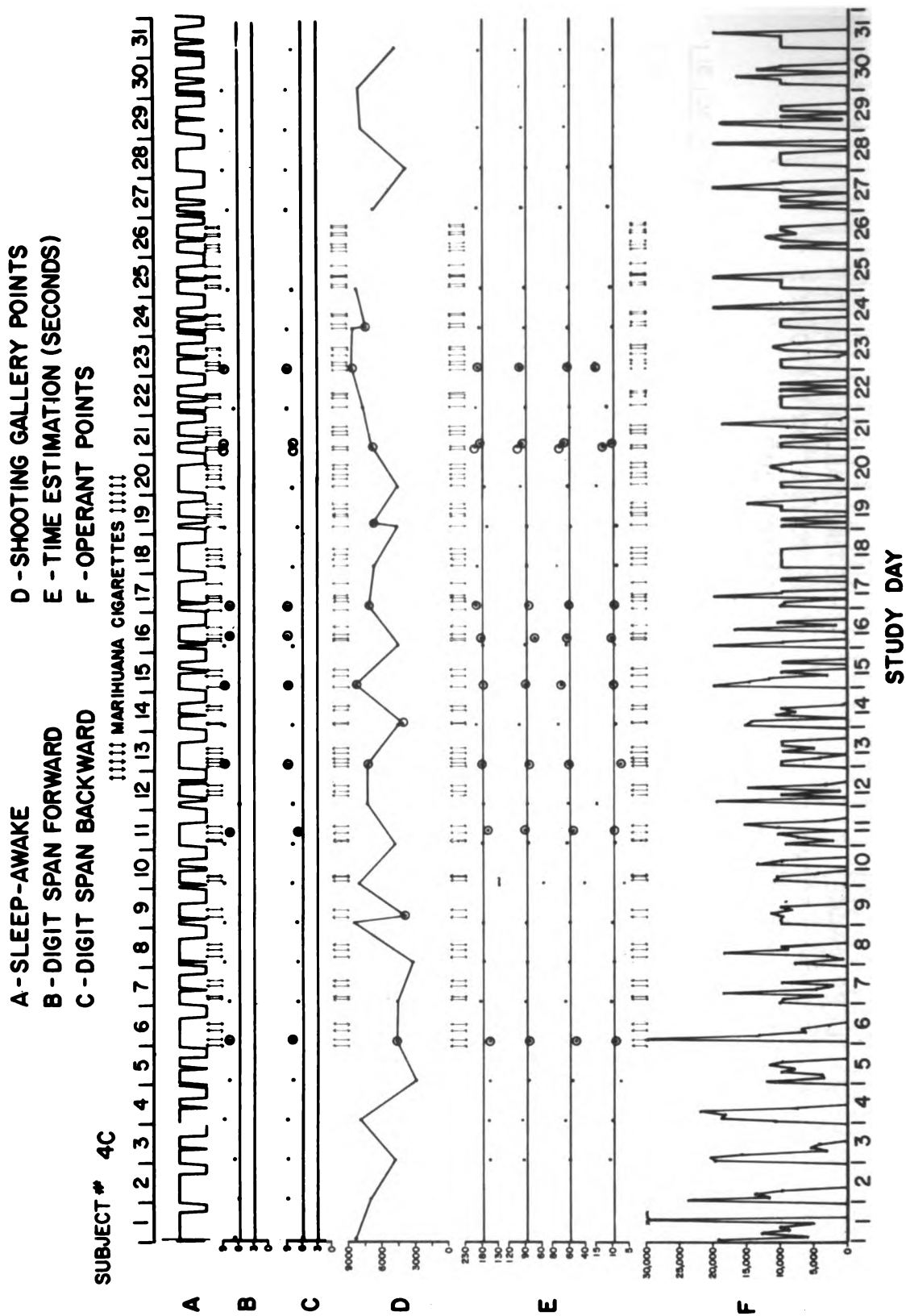
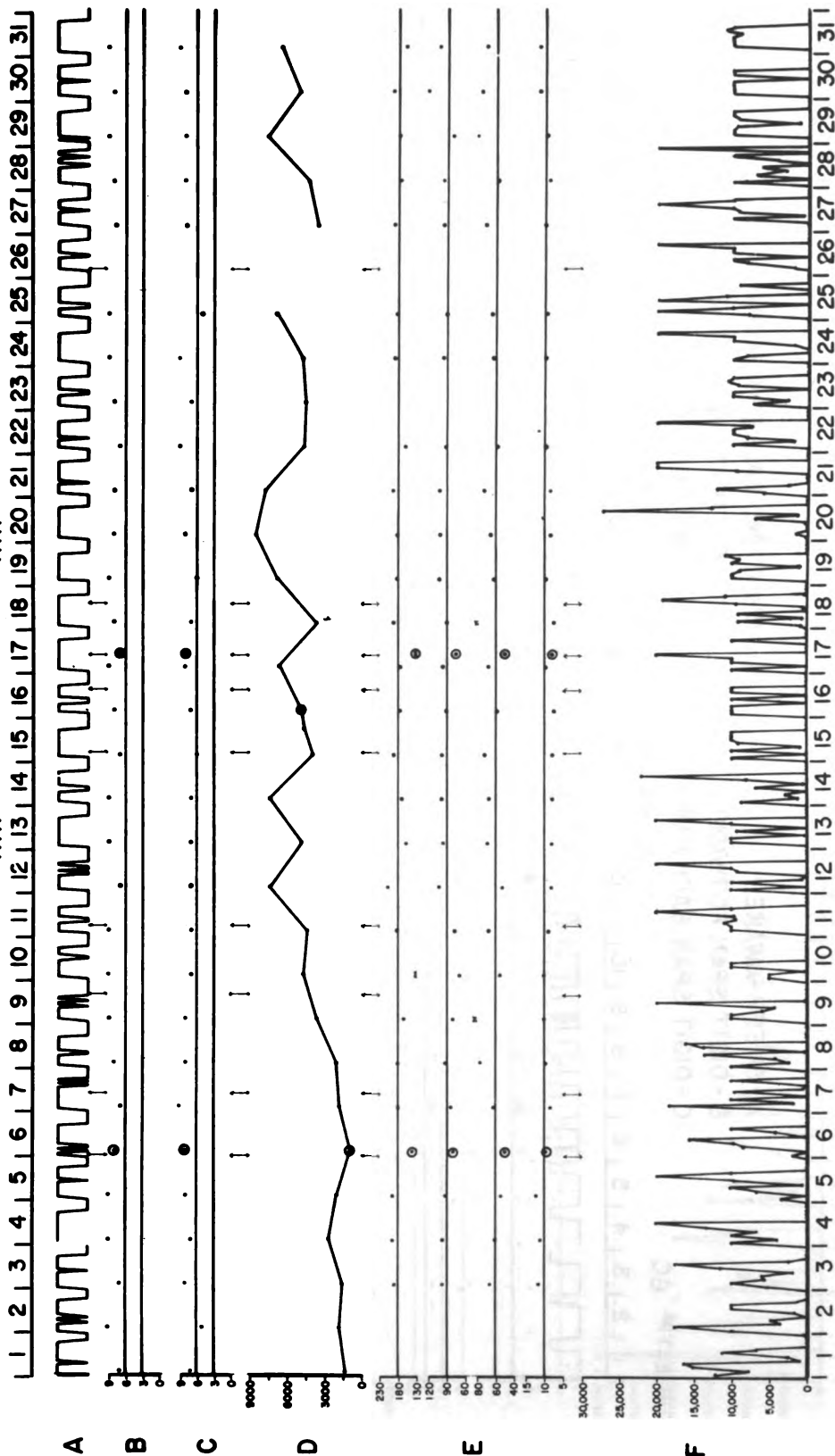


Fig. 5a

A - SLEEP-AWAKE
B - DIGIT SPAN FORWARD
C - DIGIT SPAN BACKWARD
D - SHOOTING GALLERY POINTS
E - TIME ESTIMATION (SECONDS)
F - OPERANT POINTS

SUBJECT # 5C

||||| MARIJUANA CIGARETTES |||||



STUDY DAY

Fig. 6a

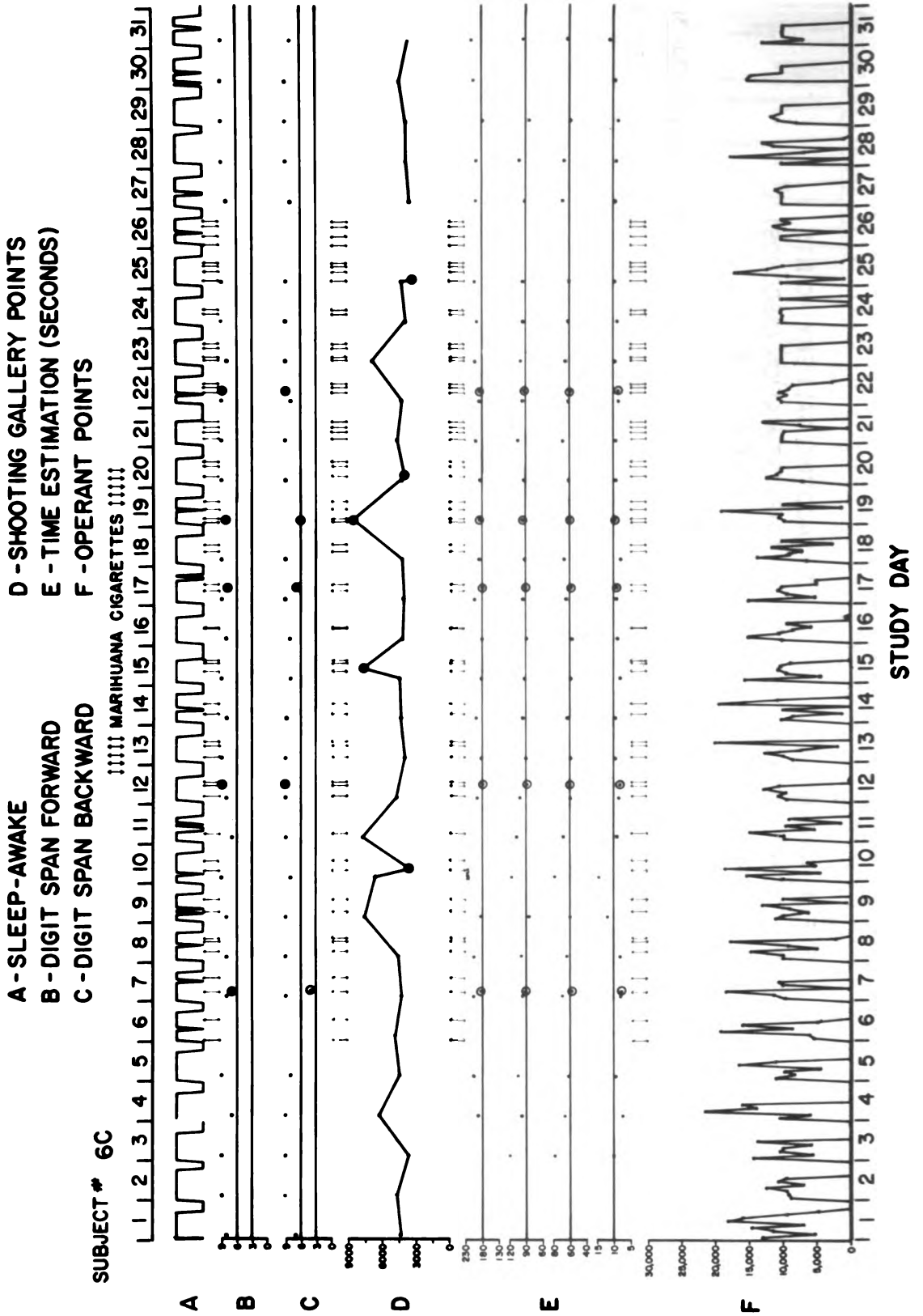


Fig. 7a

A - SLEEP-AWAKE
 B - DIGIT SPAN FORWARD
 C - DIGIT SPAN BACKWARD
 D - SHOOTING GALLERY POINTS
 E - TIME ESTIMATION (SECONDS)
 F - OPERANT POINTS

SUBJECT # 7C

||||| MARIHUANA CIGARETTES |||||

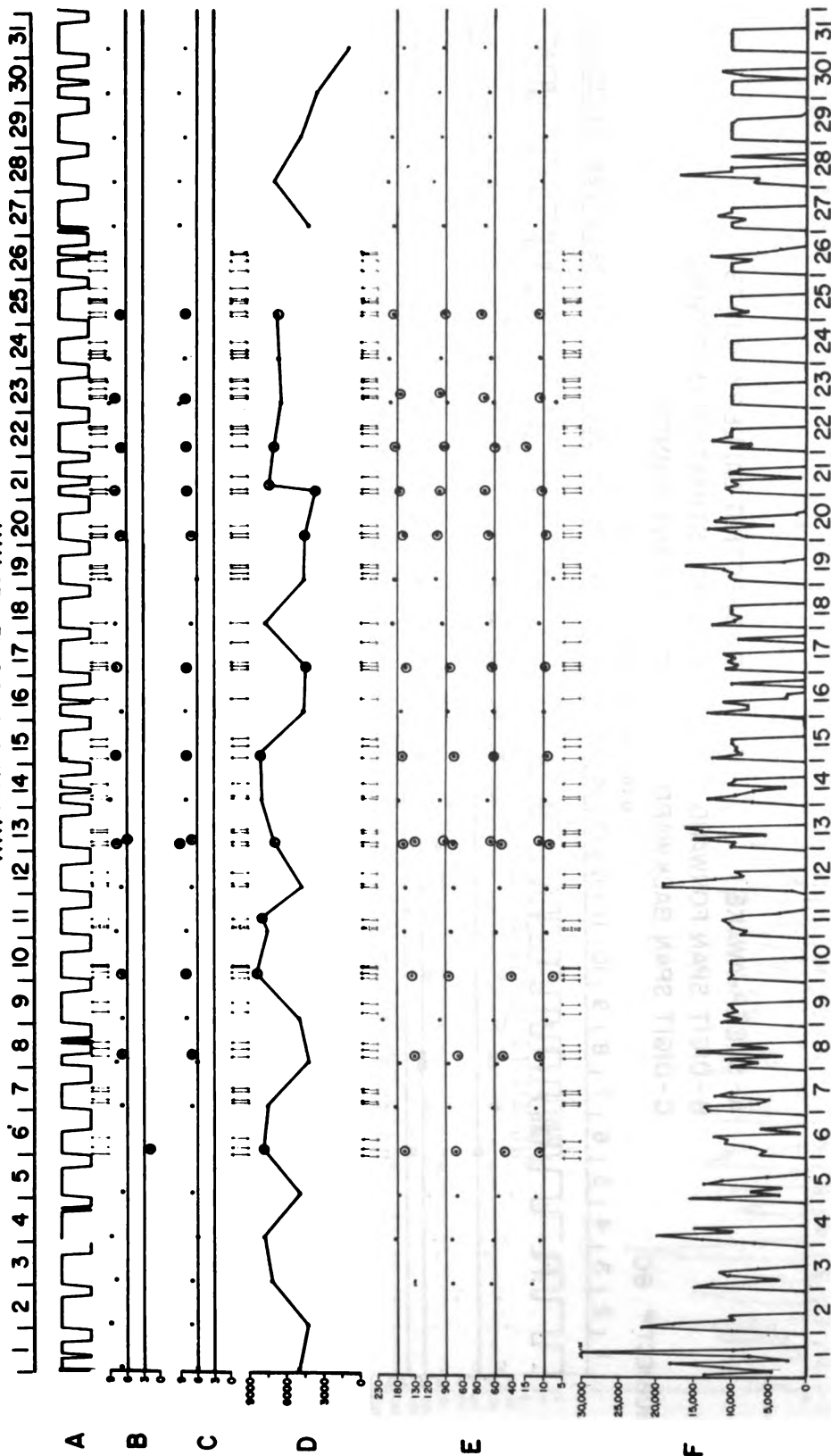


Fig. 8a

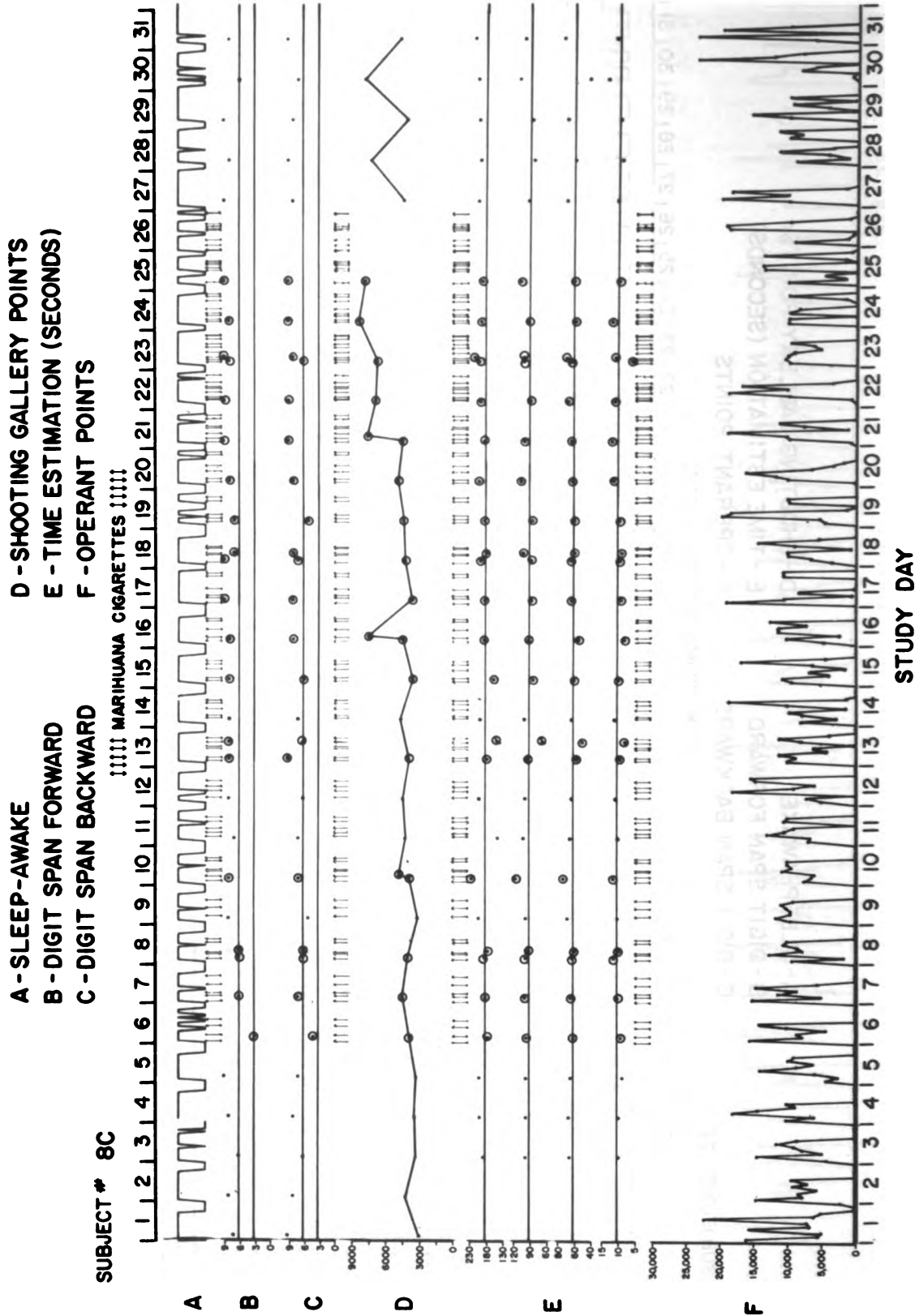


Fig. 9a

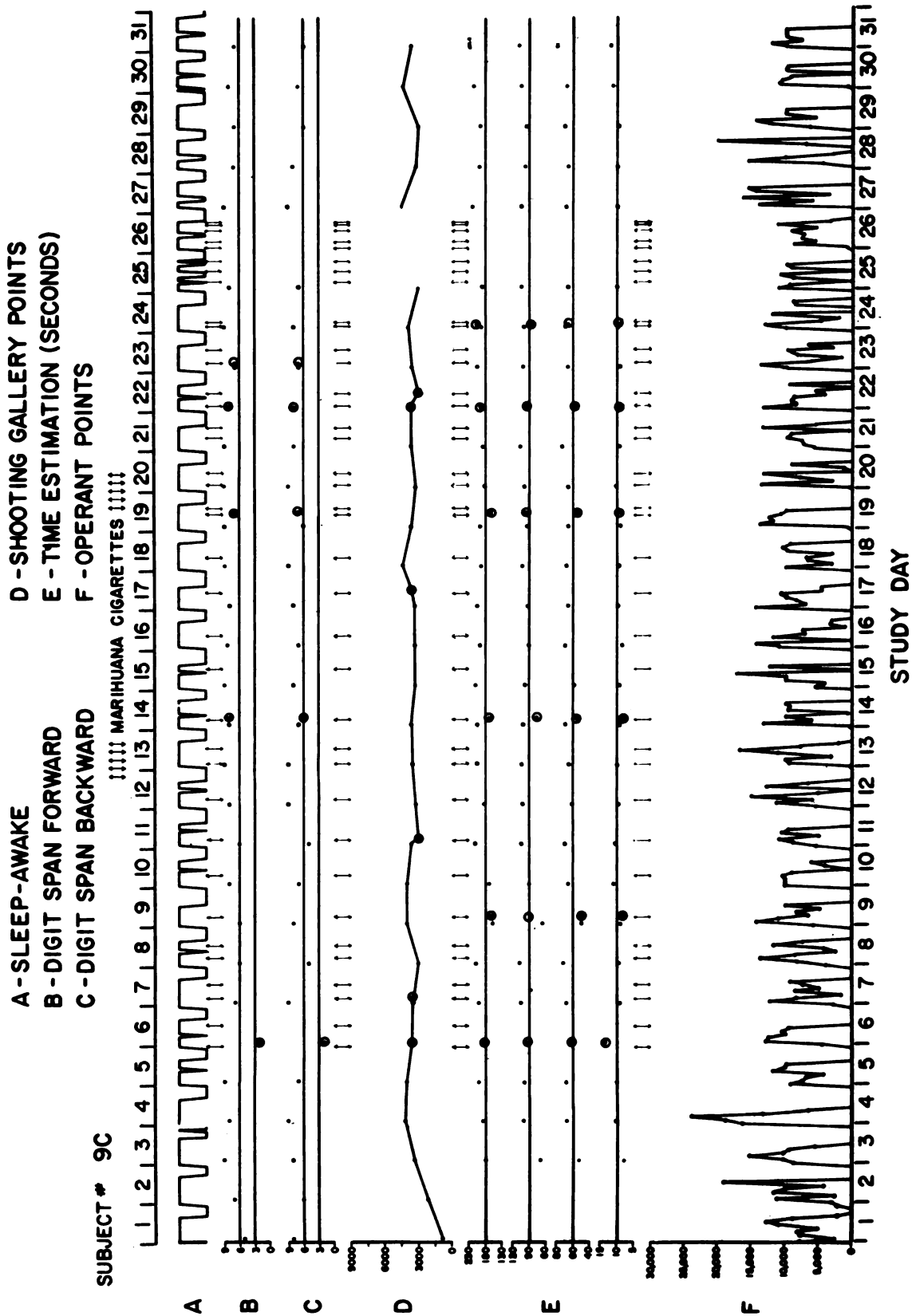


Fig. 10a

A - SLEEP-AWAKE
 B - DIGIT SPAN FORWARD
 C - DIGIT SPAN BACKWARD
 D - SHOOTING GALLERY POINTS
 E - TIME ESTIMATION (SECONDS)
 F - OPERANT POINTS

SUBJECT # IOC

11111 MARIJUANA CIGARETTES 11111
 11111

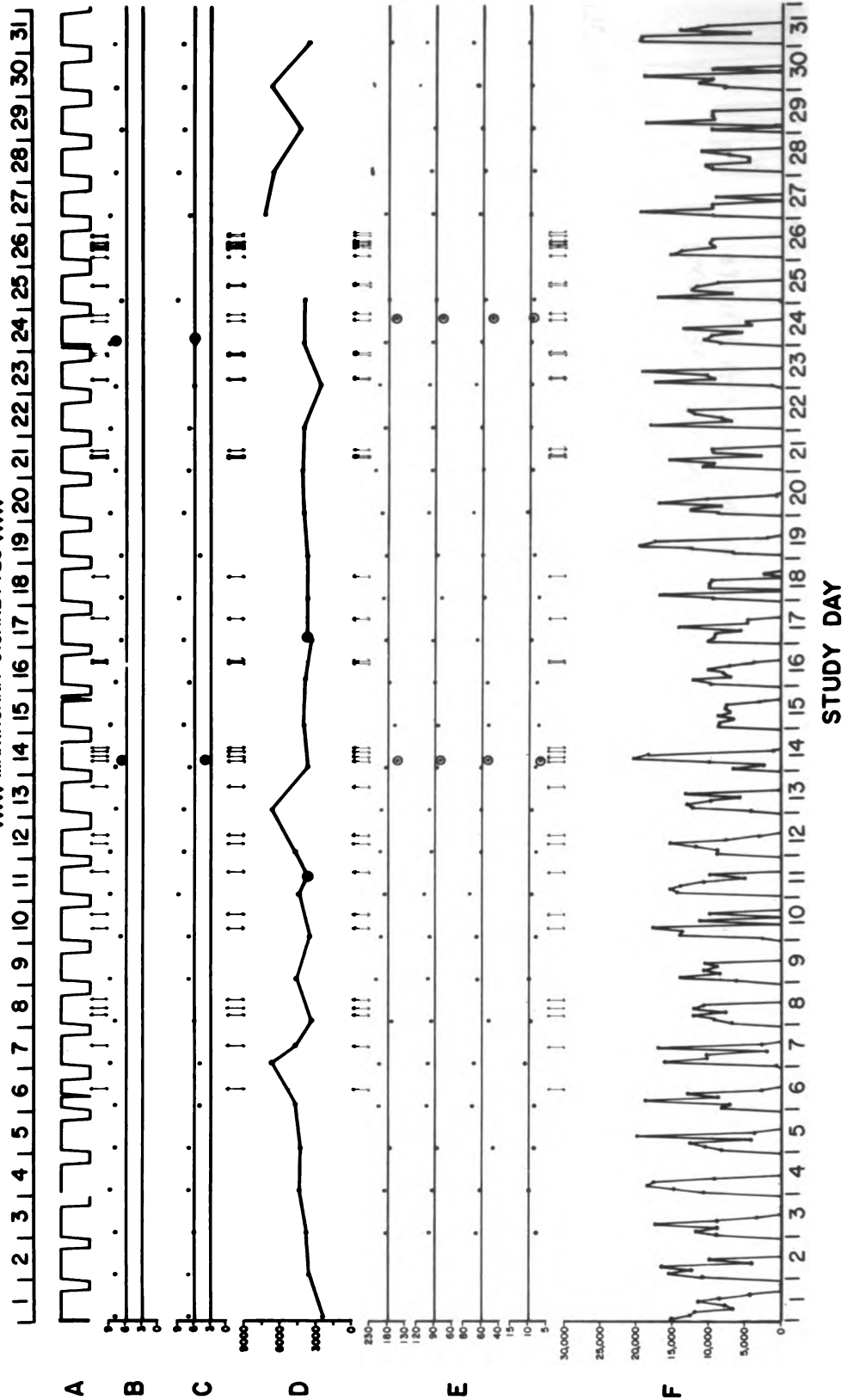


Fig. 11a

A - SLEEP-AWAKE
 B - DIGIT SPAN FORWARD
 C - DIGIT SPAN BACKWARD
 D - SHOOTING GALLERY POINTS
 E - TIME ESTIMATION (SECONDS)
 F - OPERANT POINTS

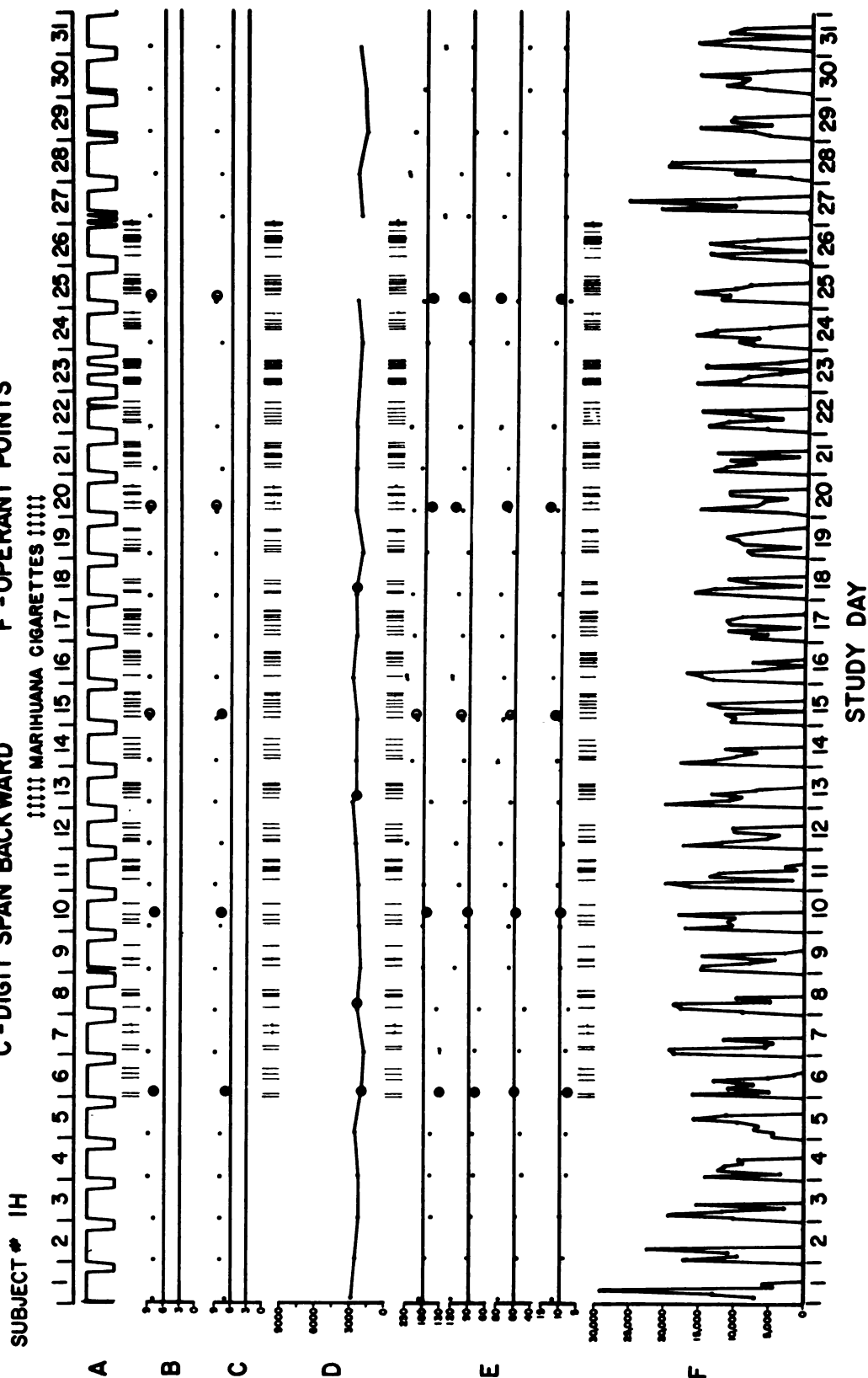


Fig. 12a

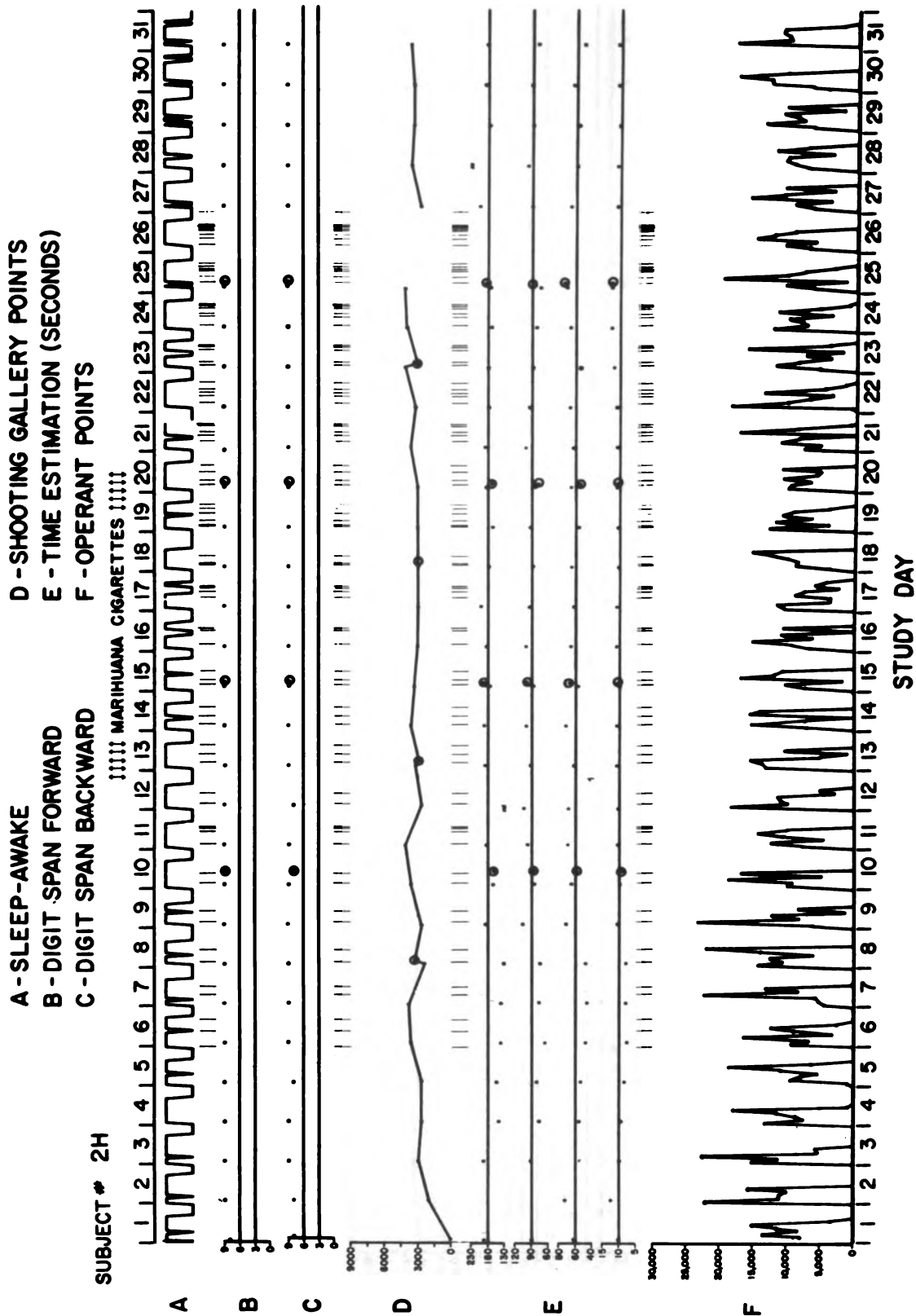


Fig. 13a

A - SLEEP-AWAKE

B - DIGIT SPAN FORWARD

C - DIGIT SPAN BACKWARD

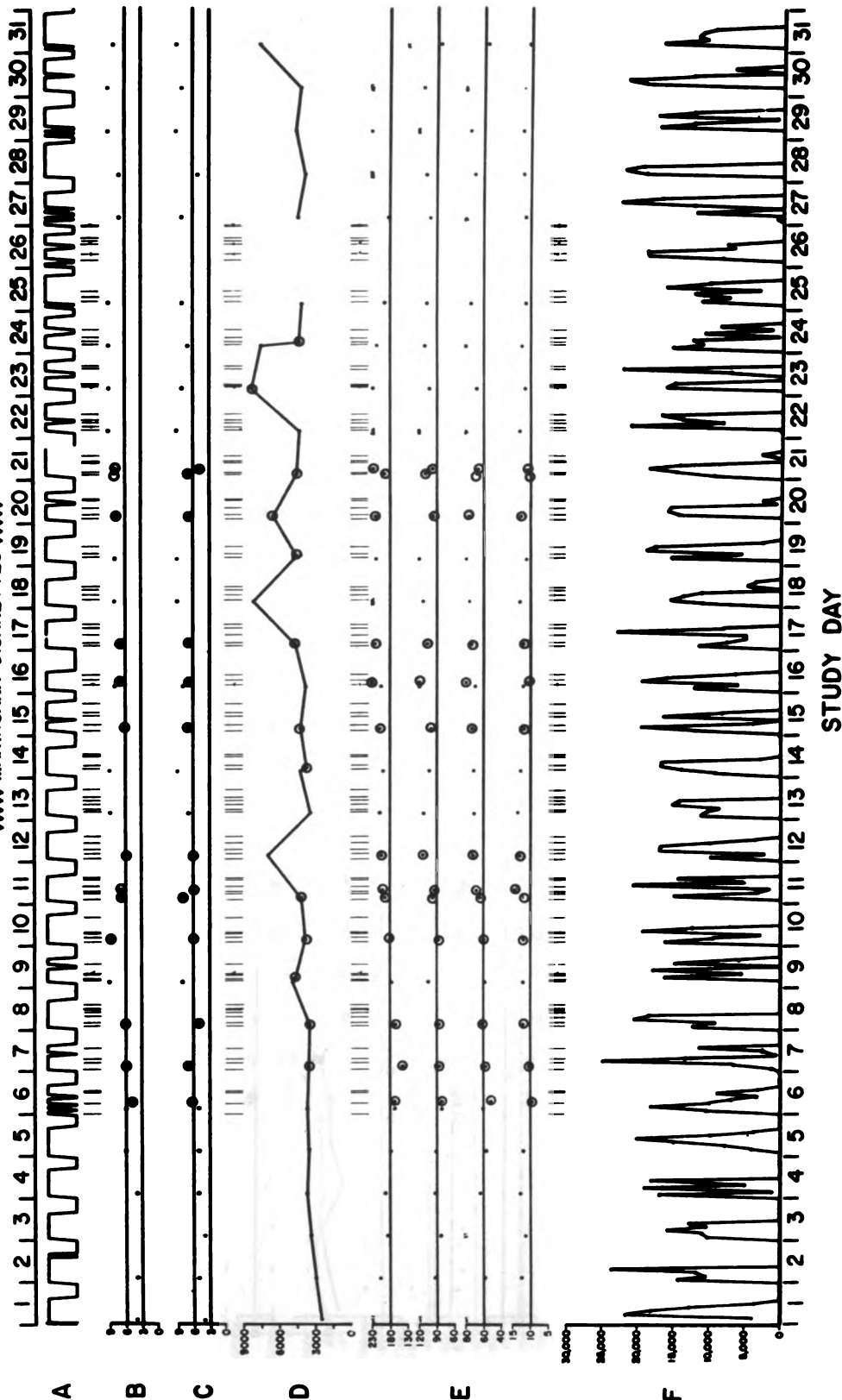
SUBJECT # 3H

D - SHOOTING GALLERY POINTS

E - TIME ESTIMATION (SECONDS)

F - OPERANT POINTS

||||| MARIHUANA CIGARETTES |||||



STUDY DAY

Fig. 14a

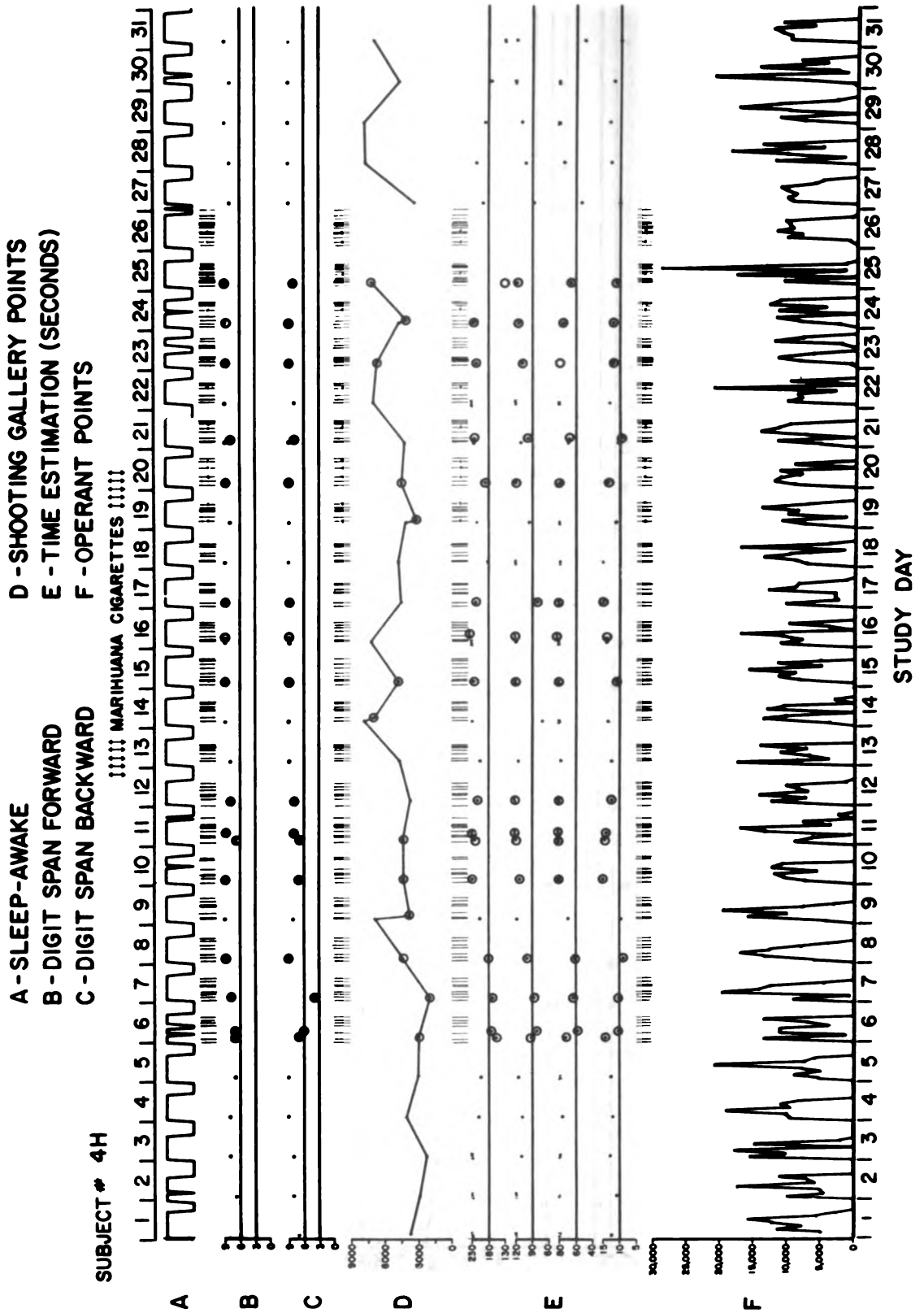


Fig. 15a

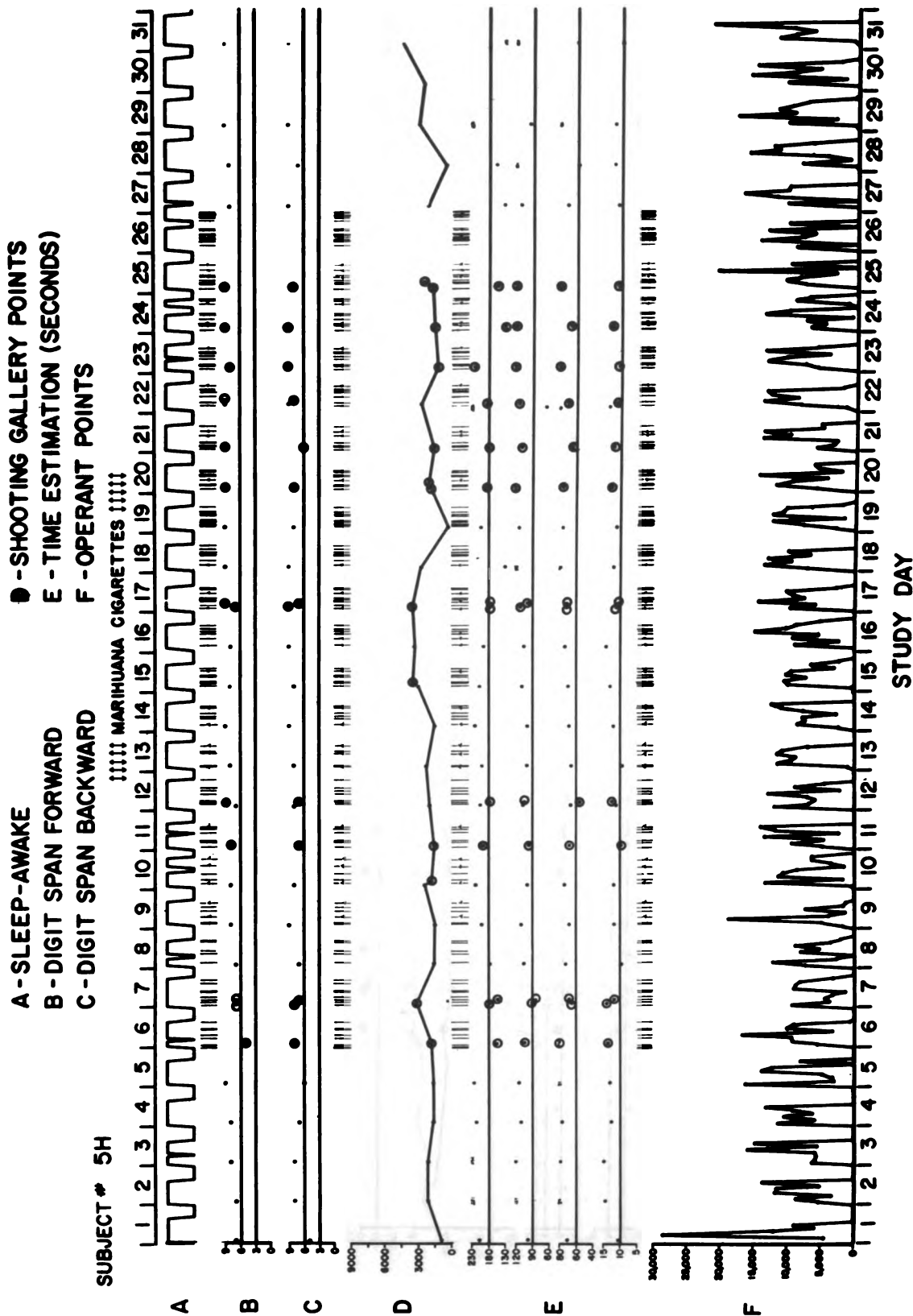


Fig. 16a

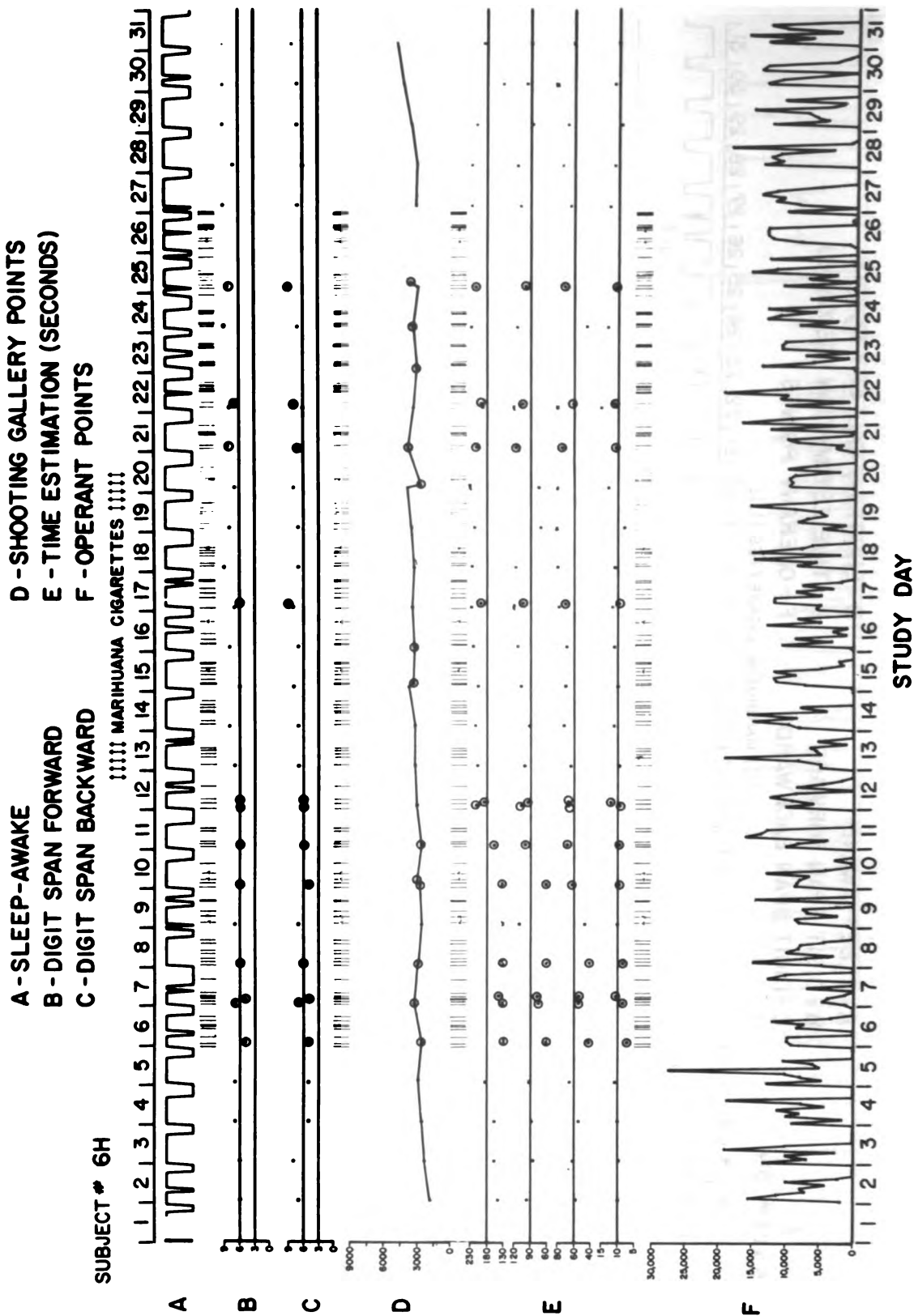


Fig. 17a

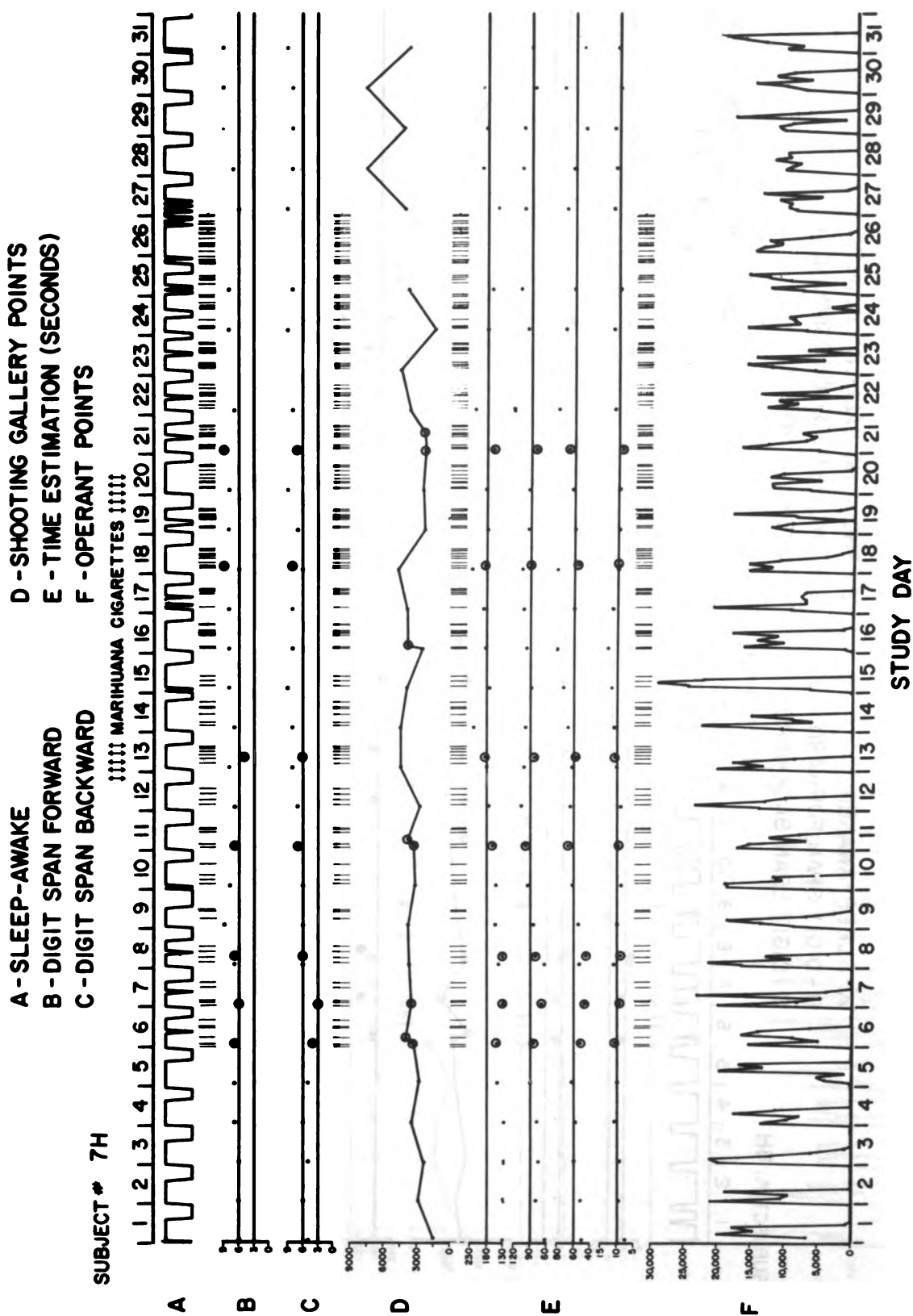


Fig. 18a

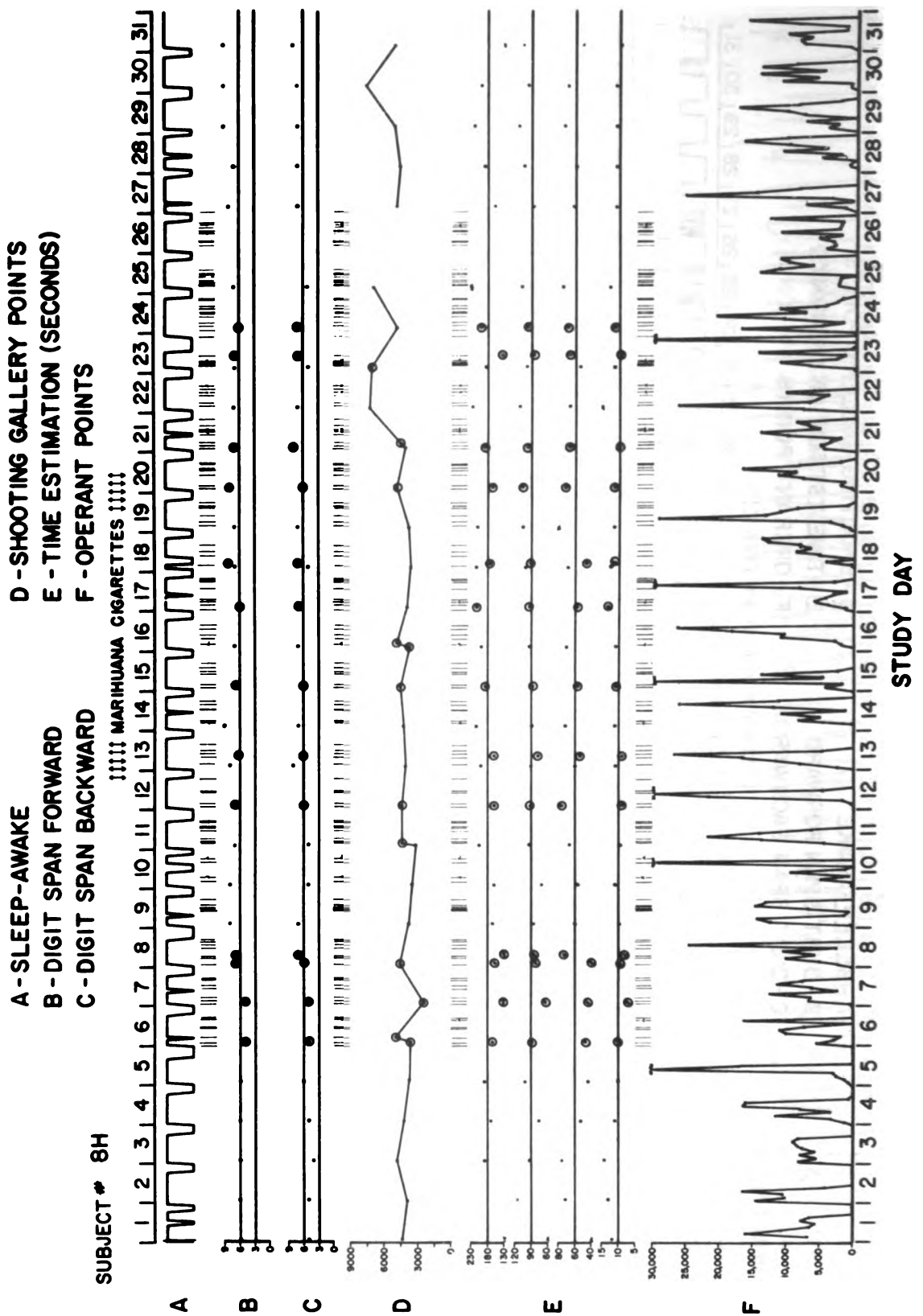


Fig. 19a

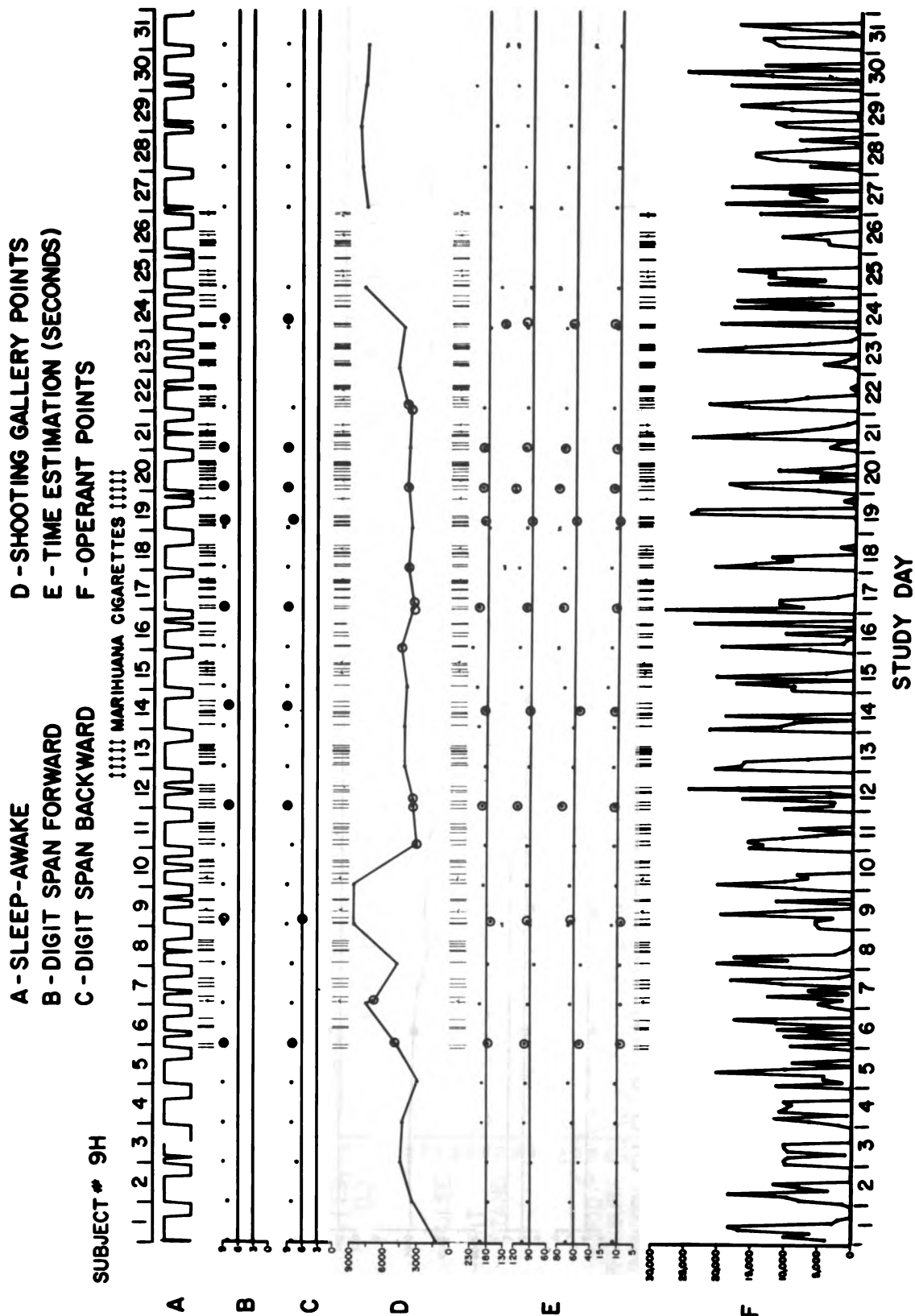


Fig. 20a

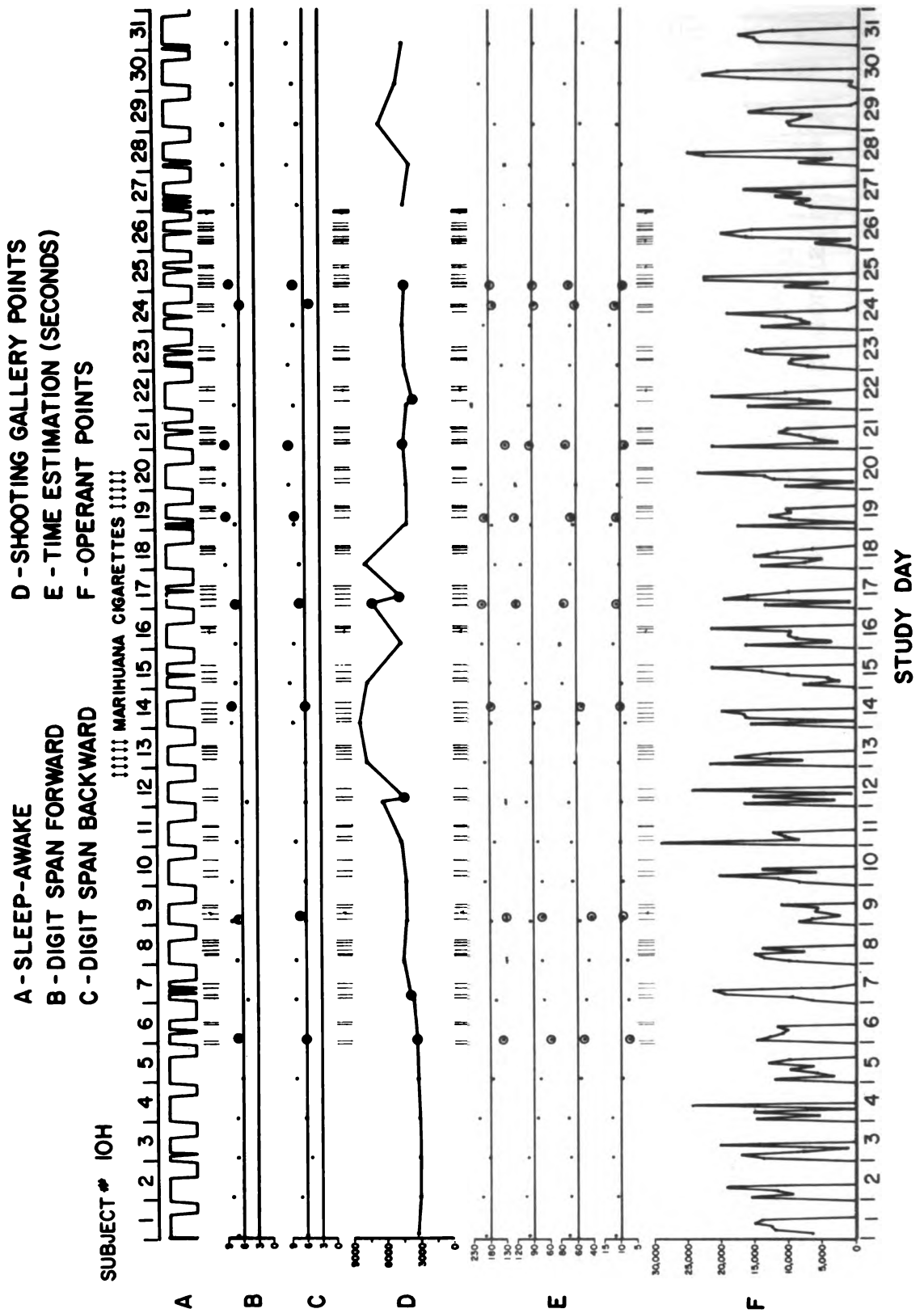


Fig. 1b

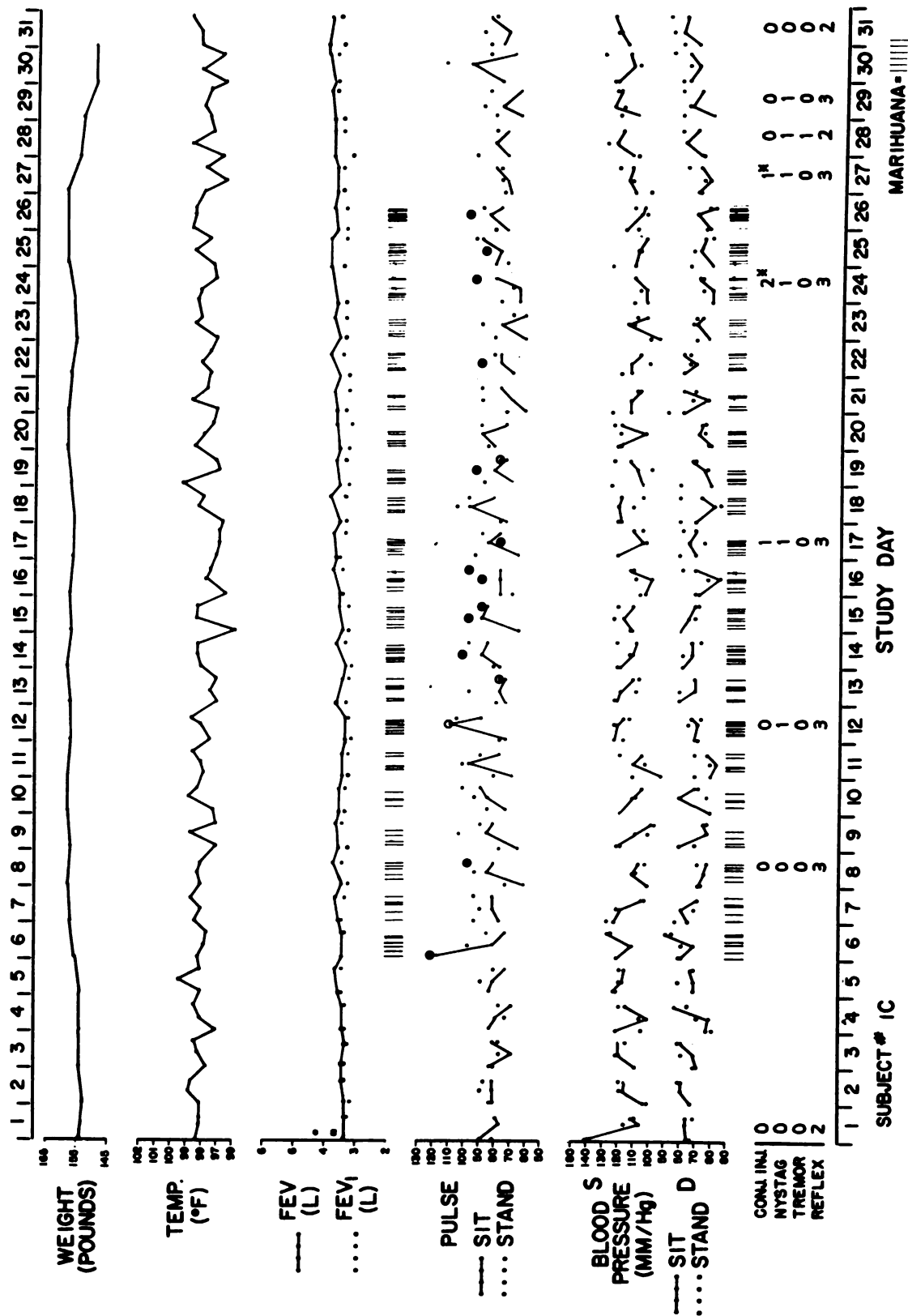


Fig. 2b

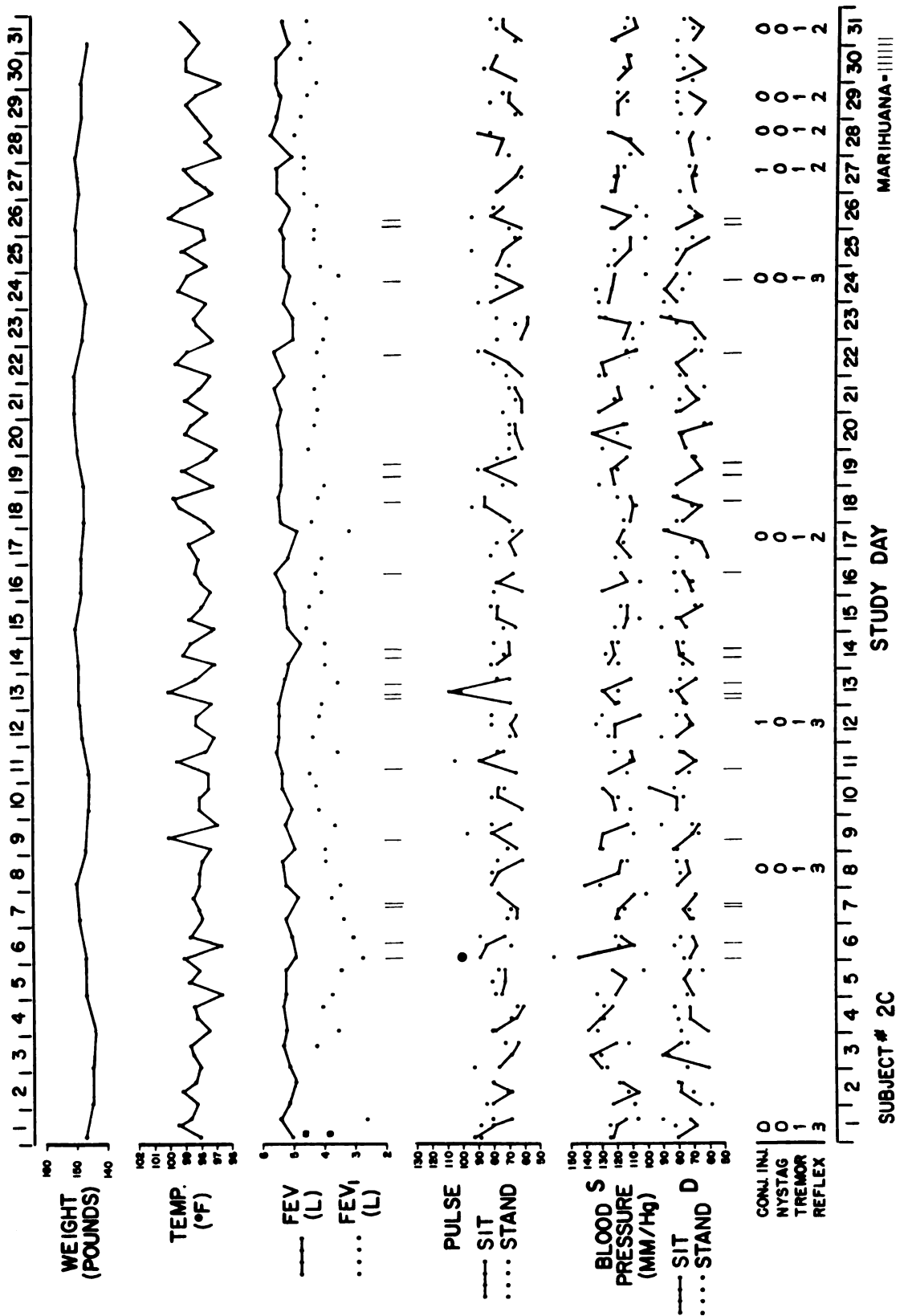


Fig. 3b

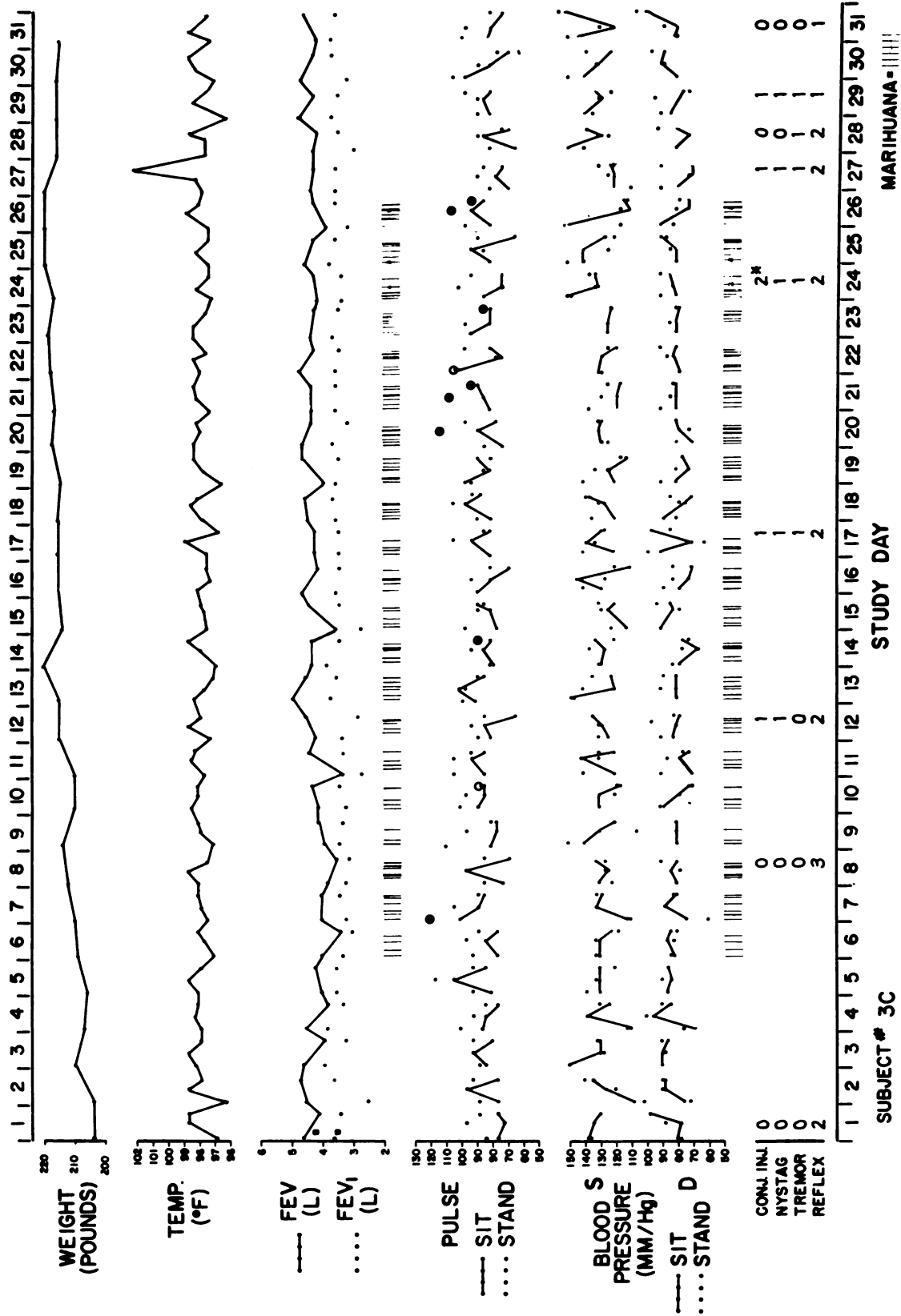


Fig. 4b

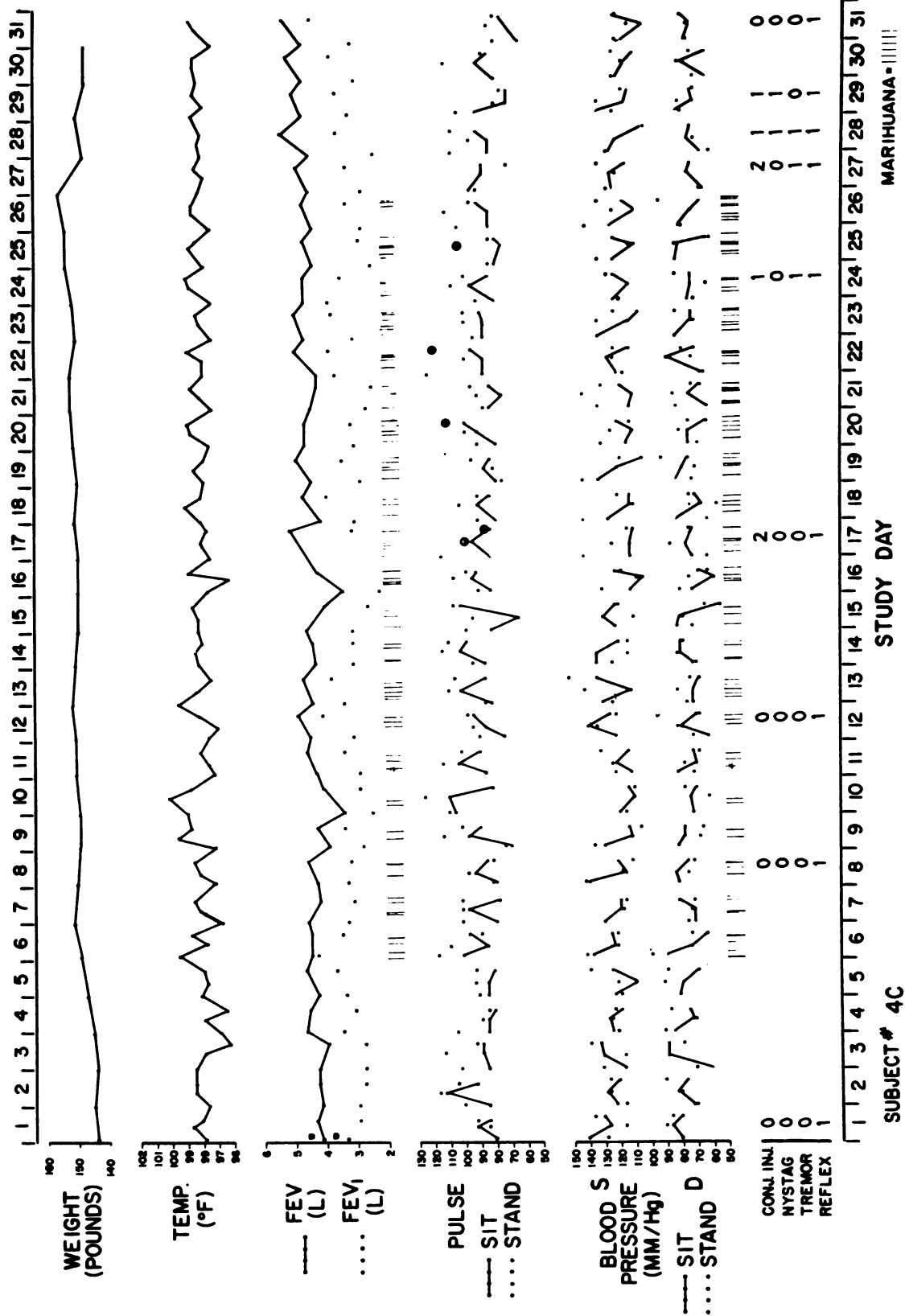


Fig. 5b

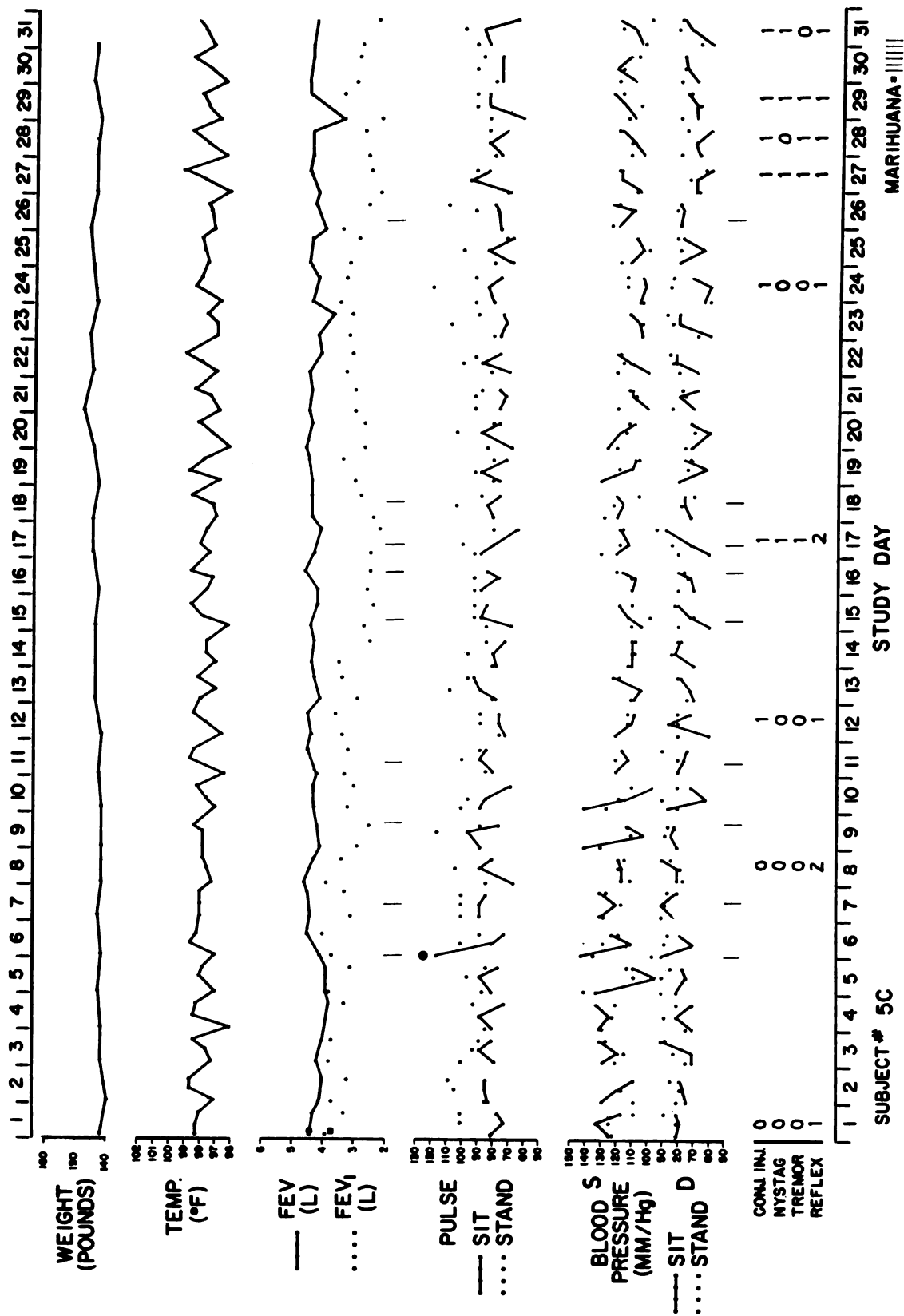


Fig. 6b

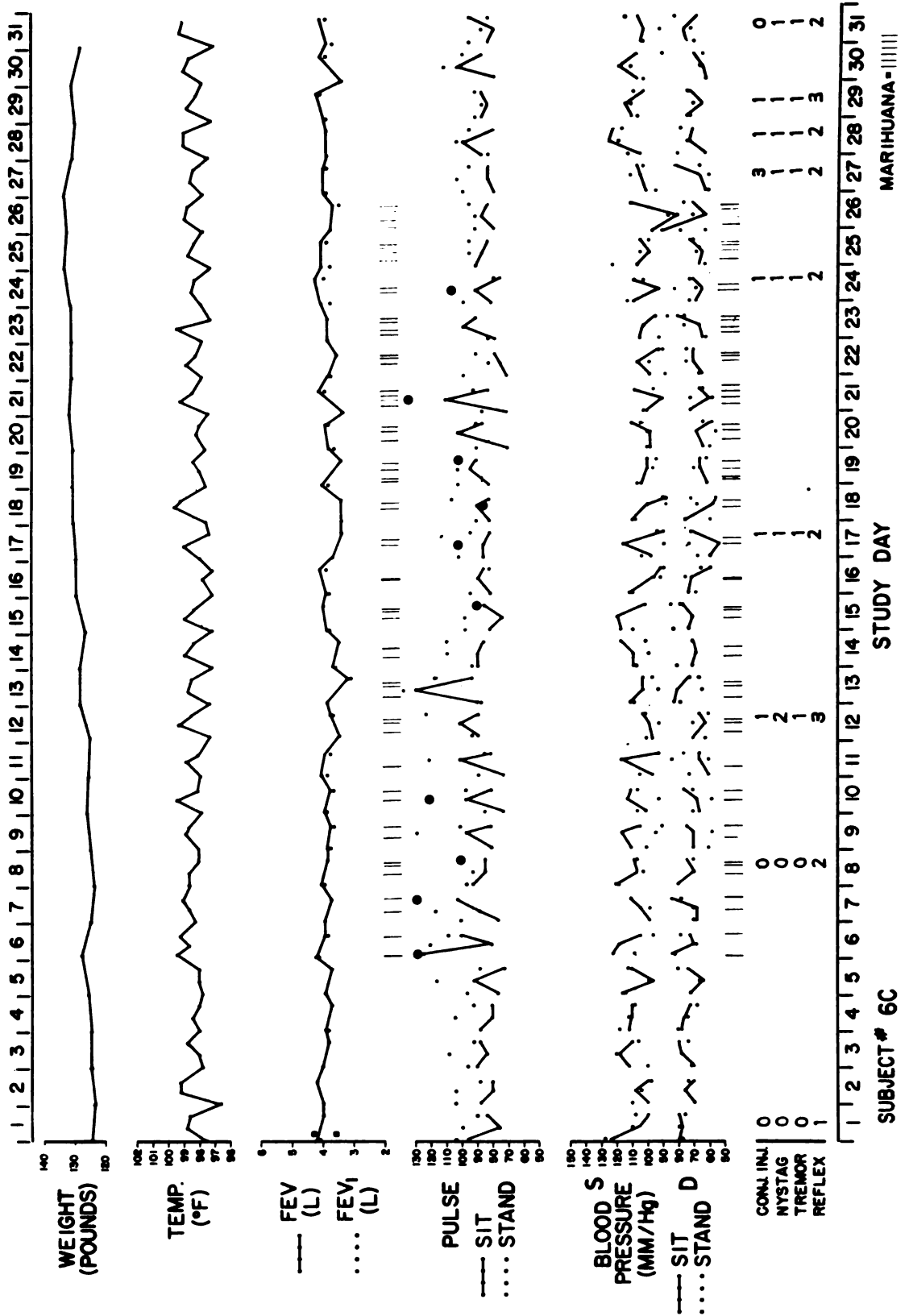


Fig. 7b

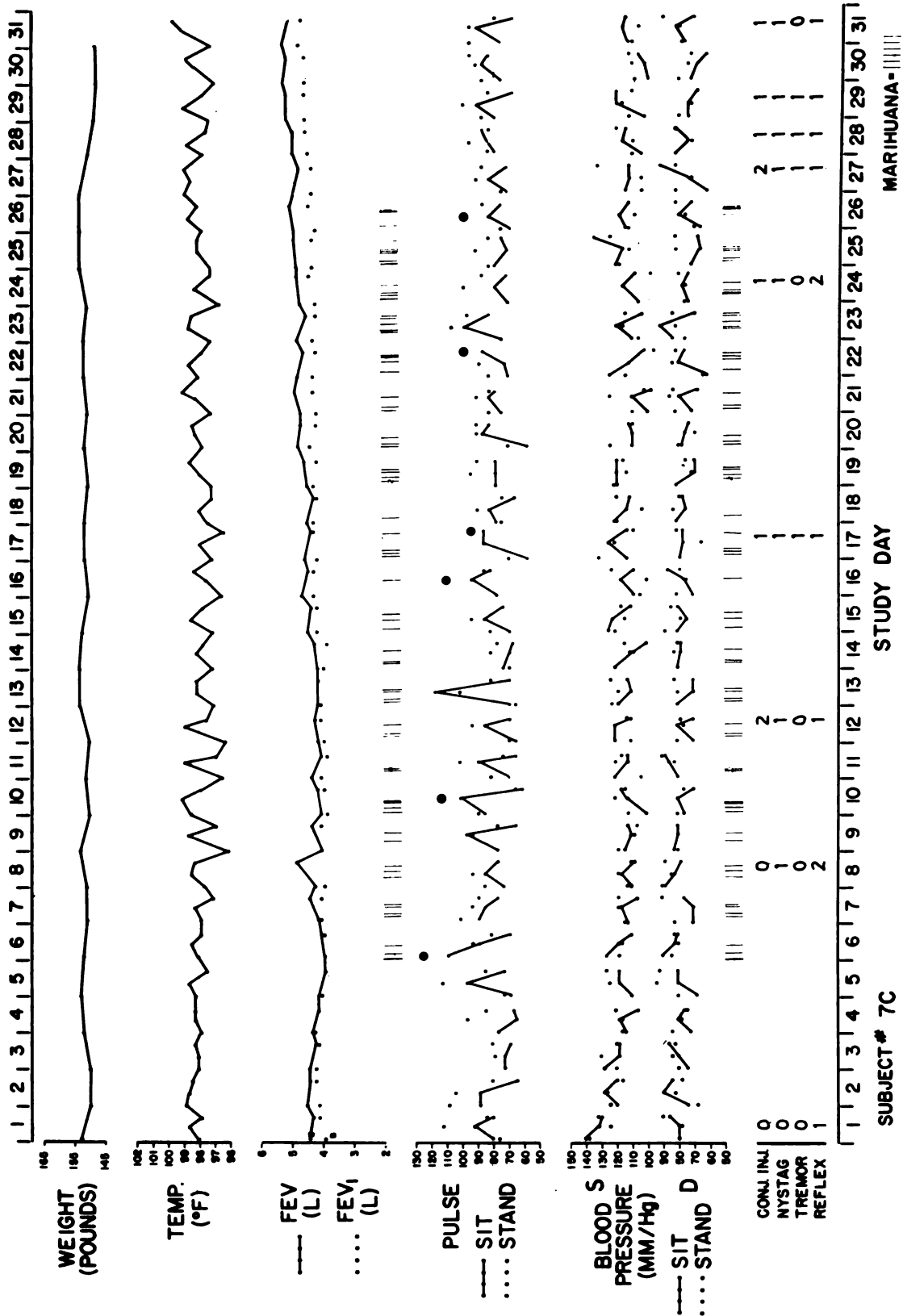


Fig. 8b

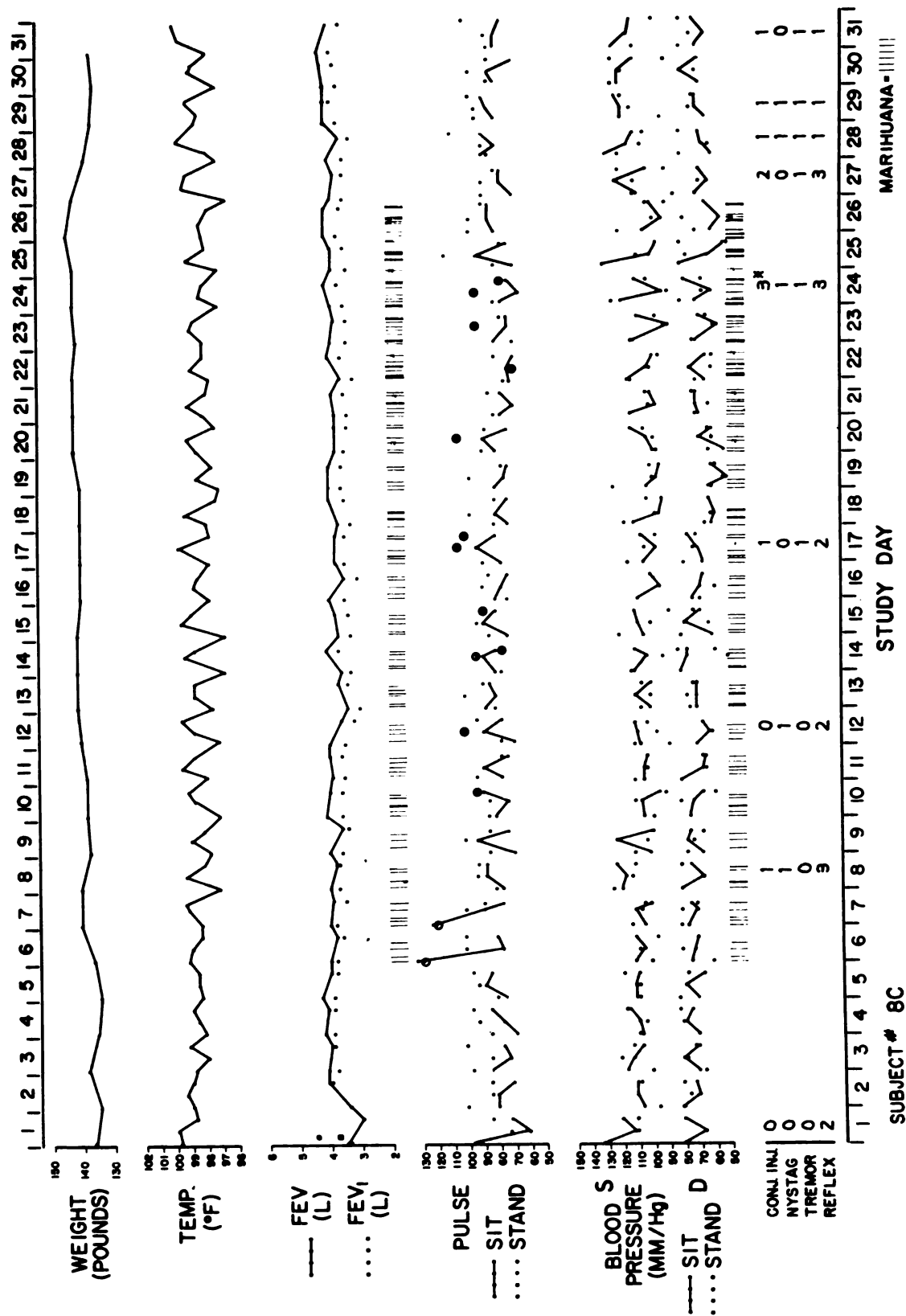


Fig. 9b

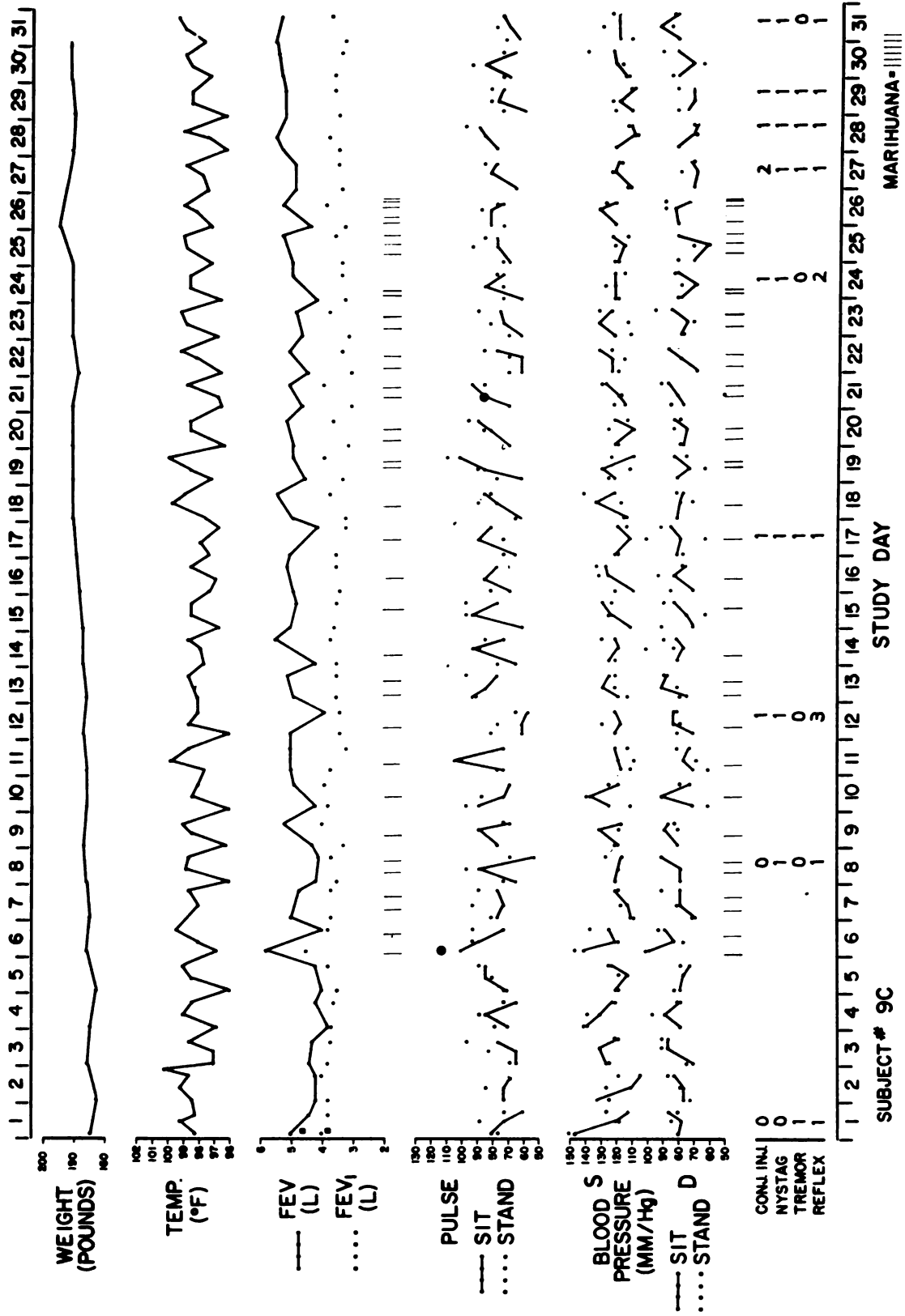


Fig. 10b

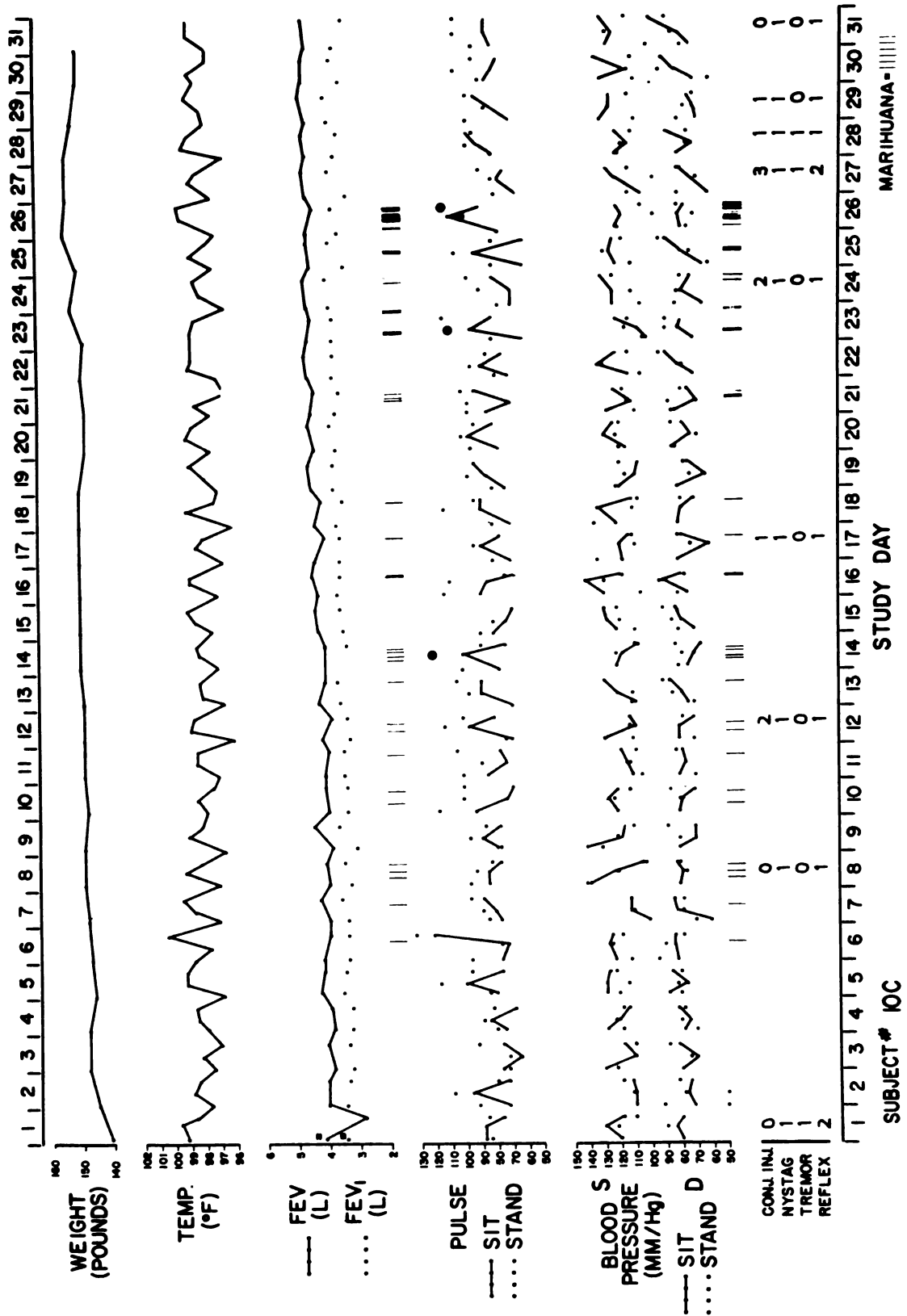


Fig. 11b

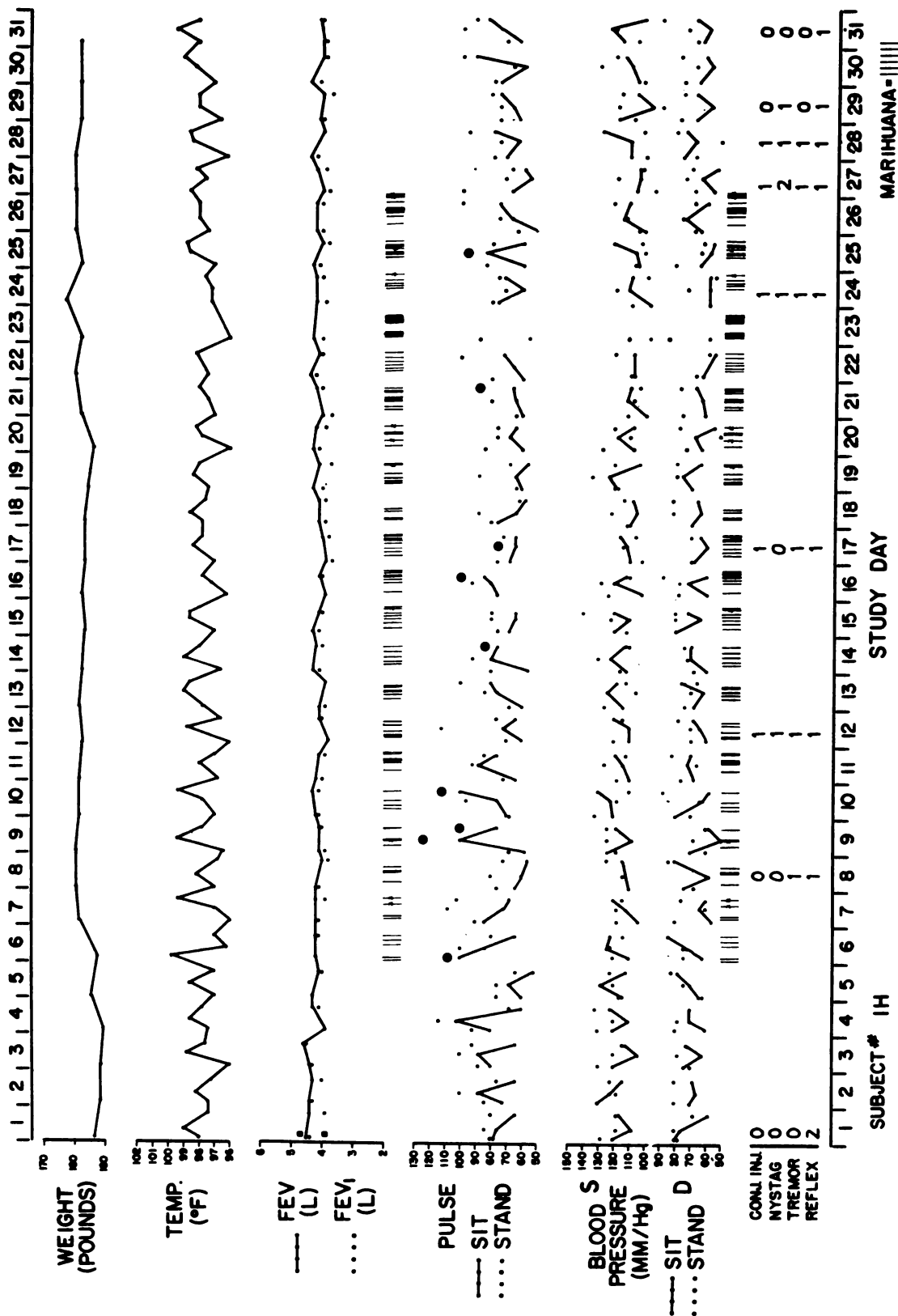


Fig. 12b

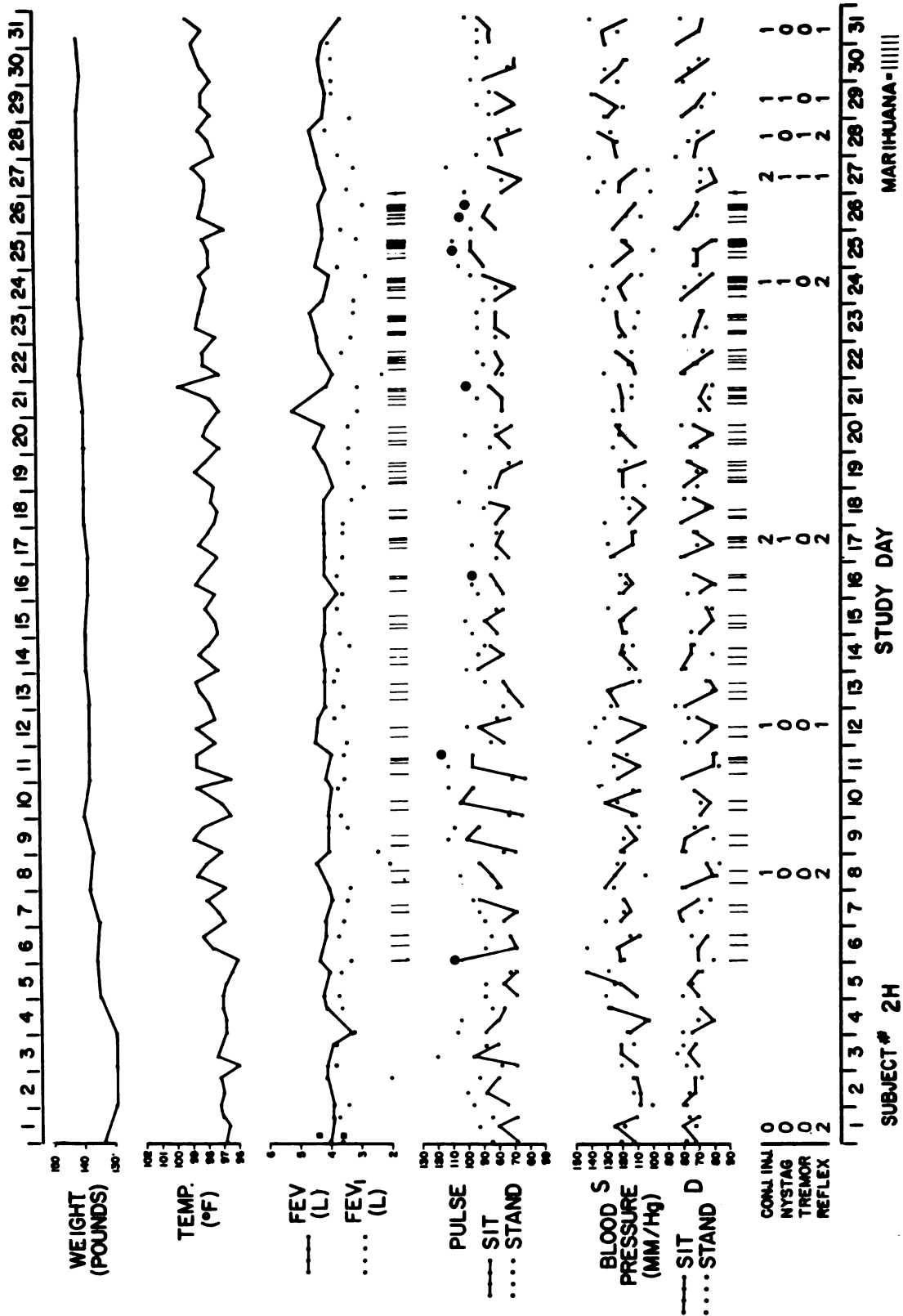


Fig. 13b

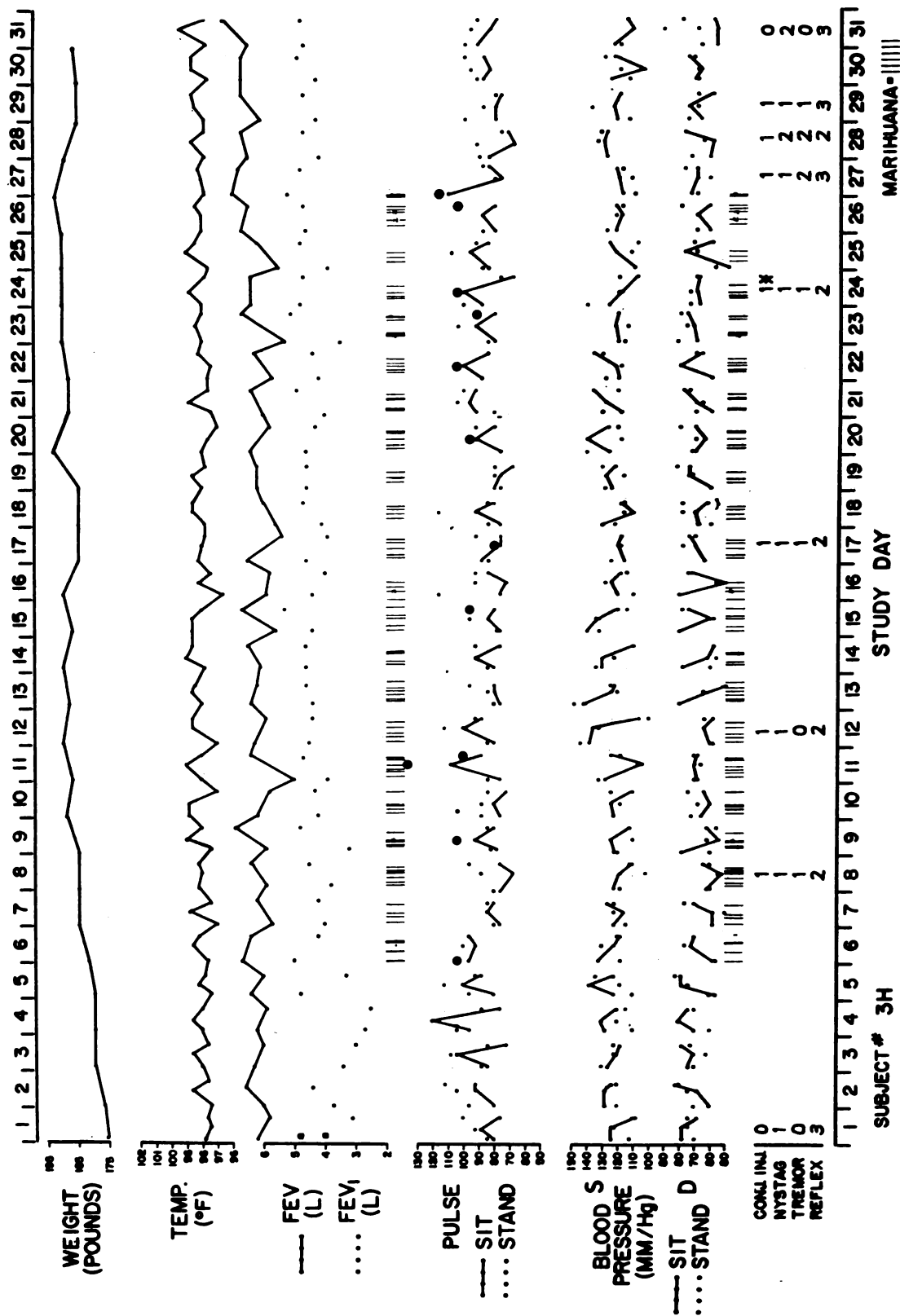


Fig. 14b

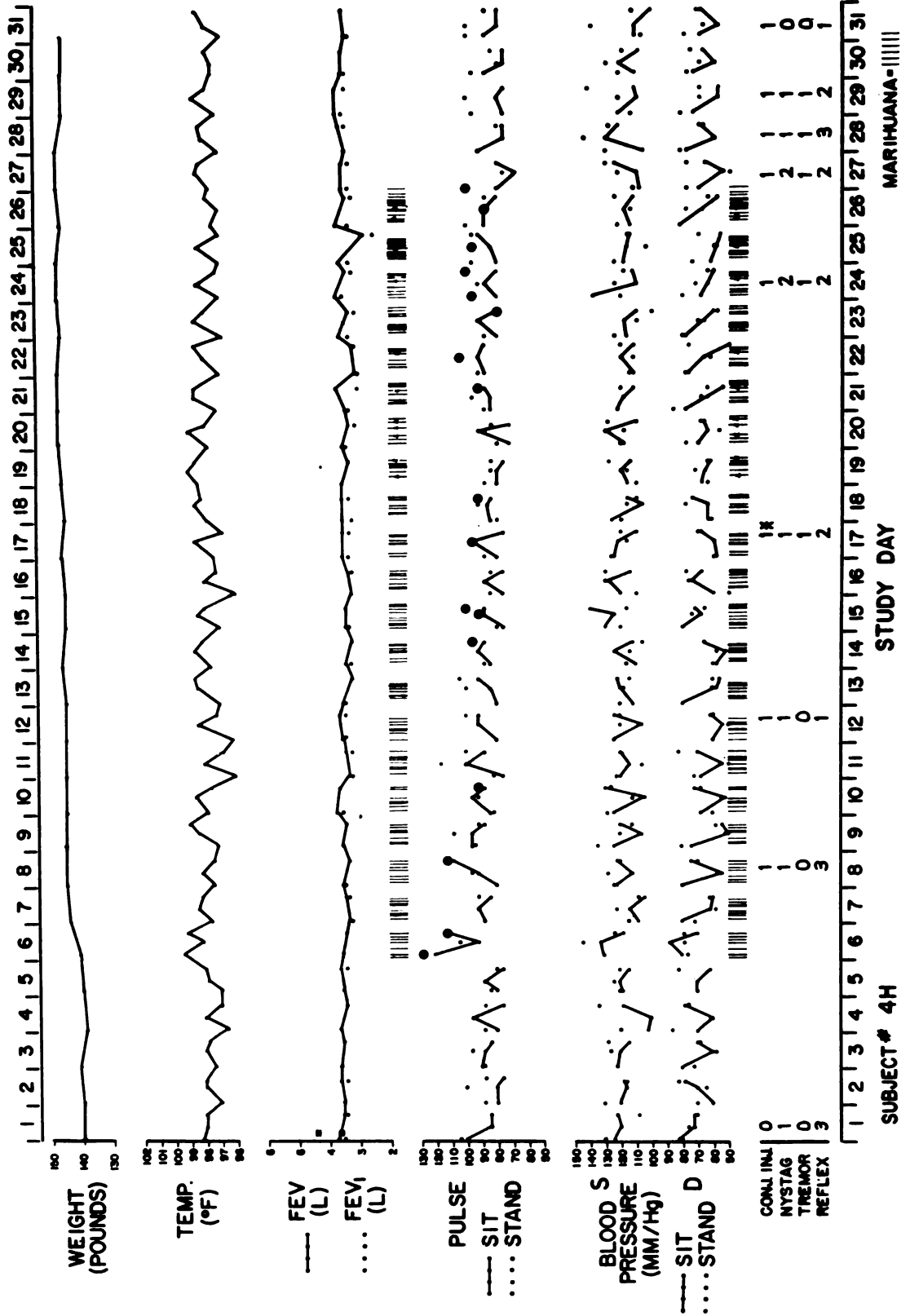


Fig. 15b

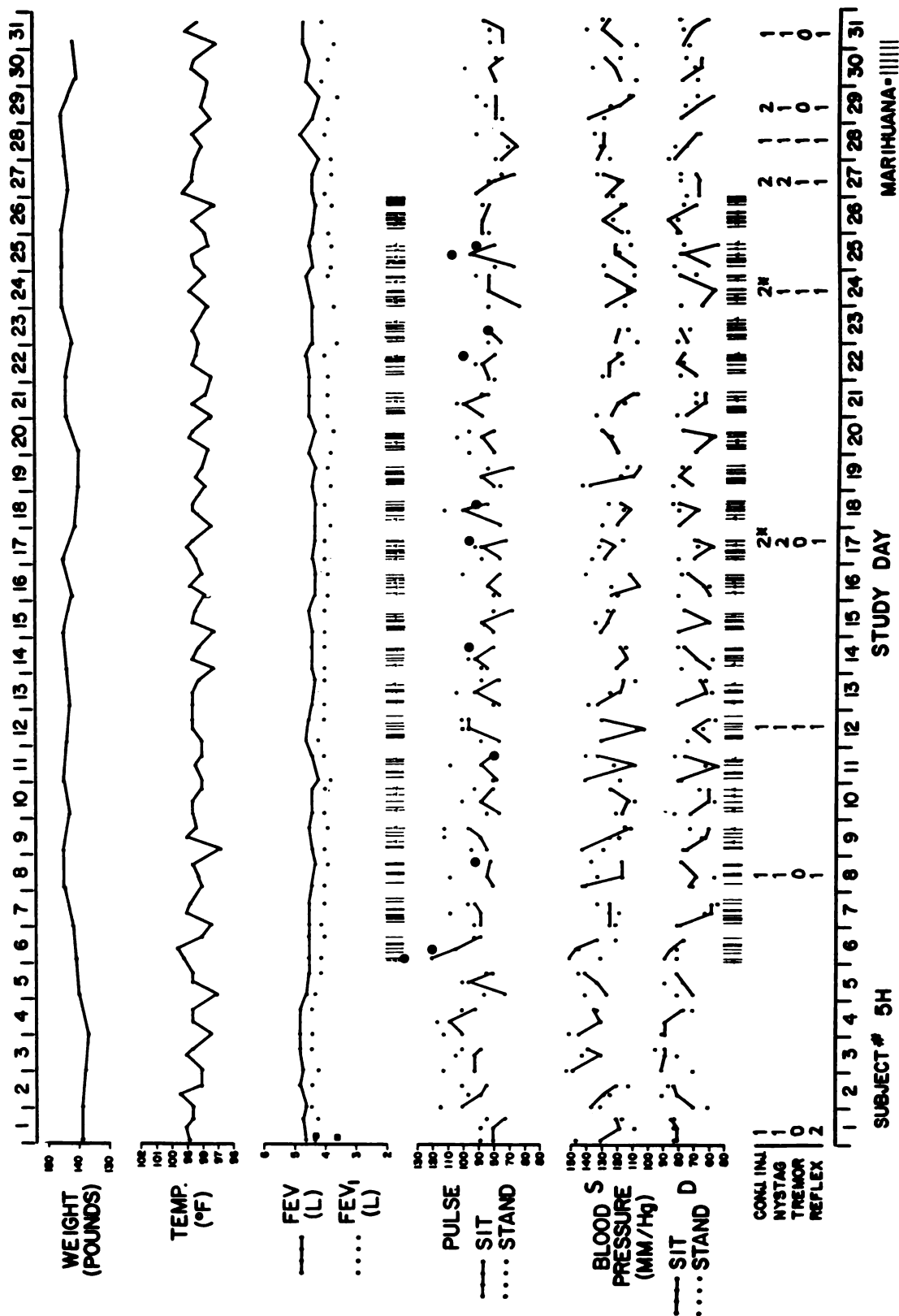


Fig. 16b

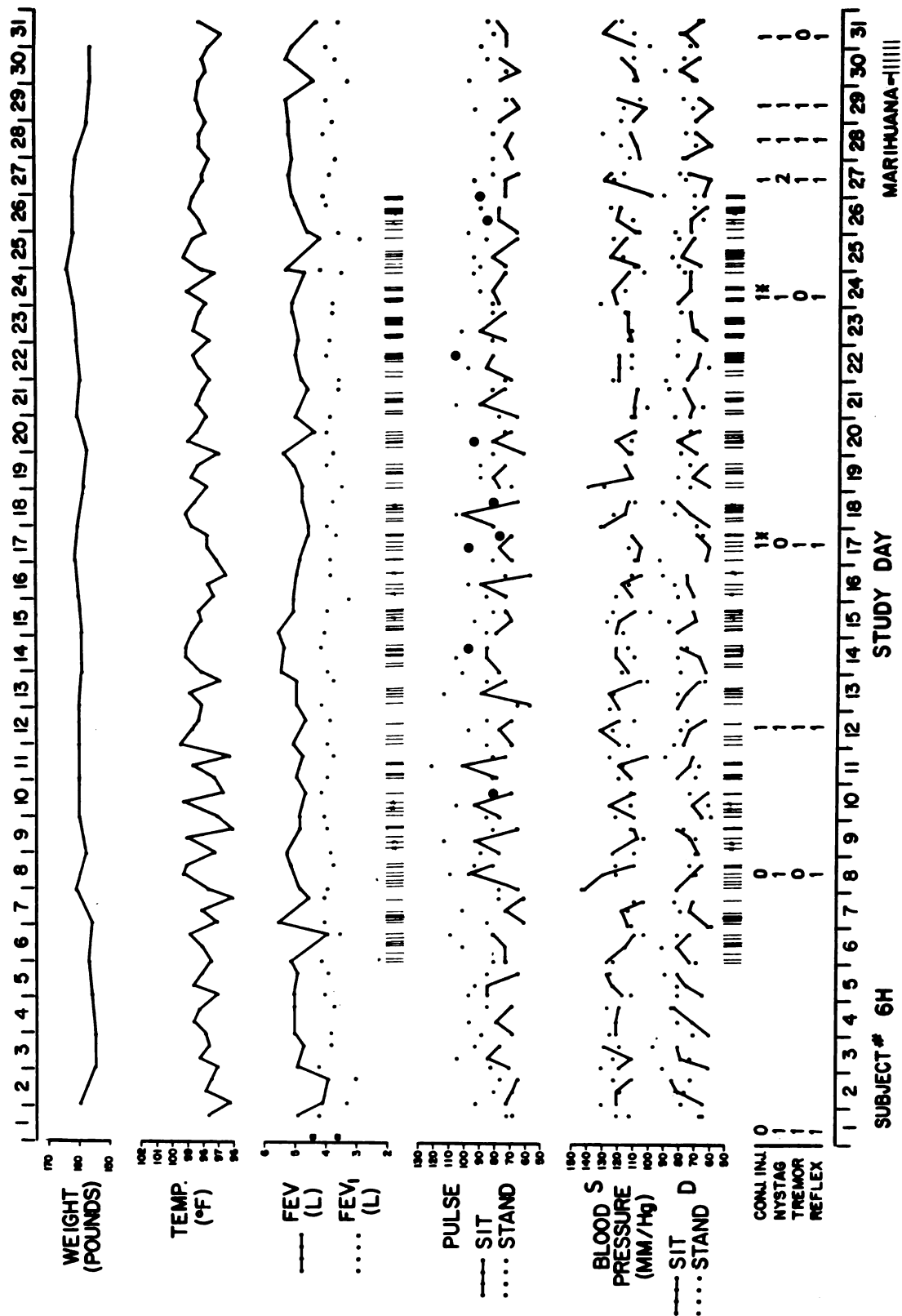


Fig. 17b

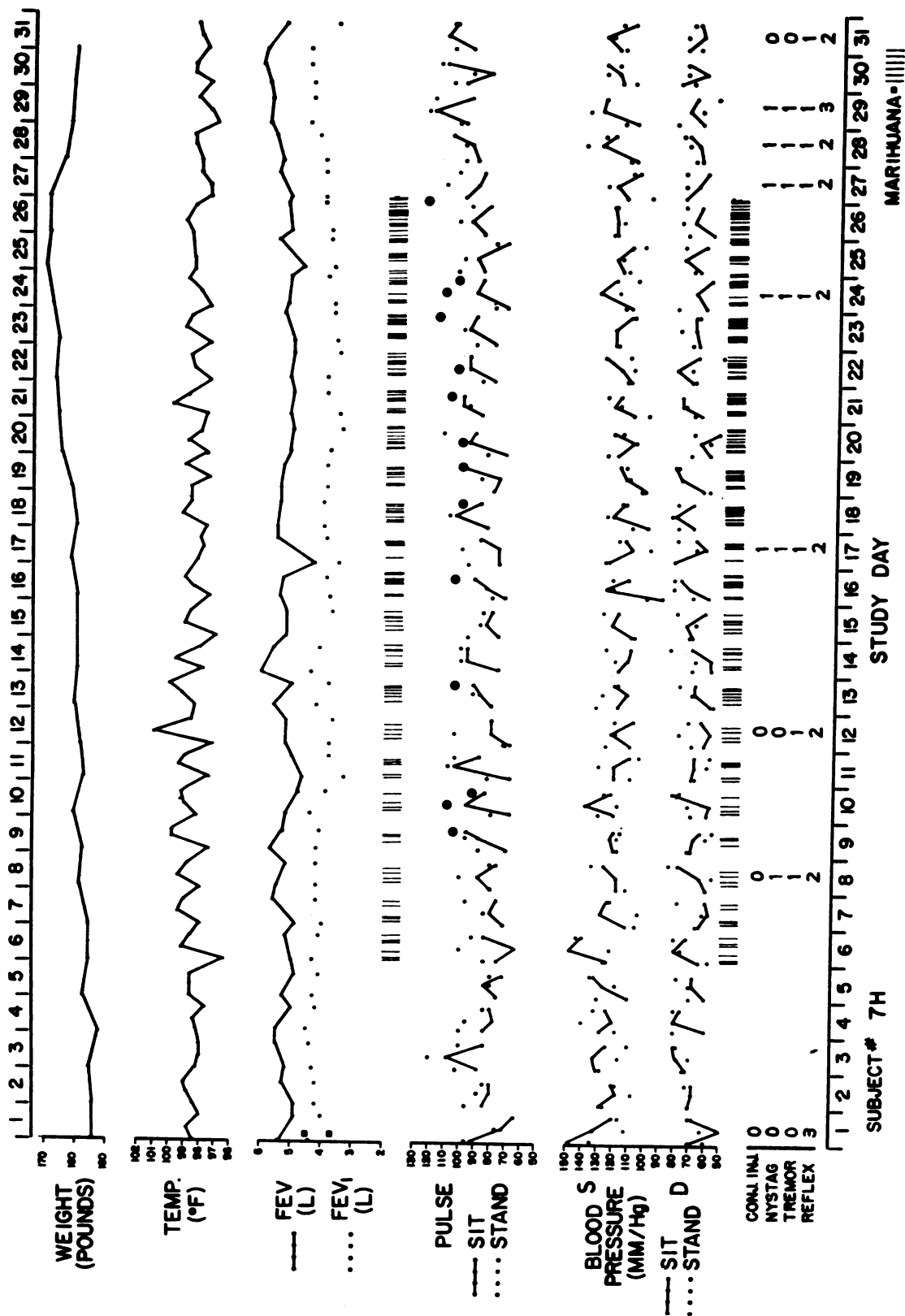


Fig. 18b

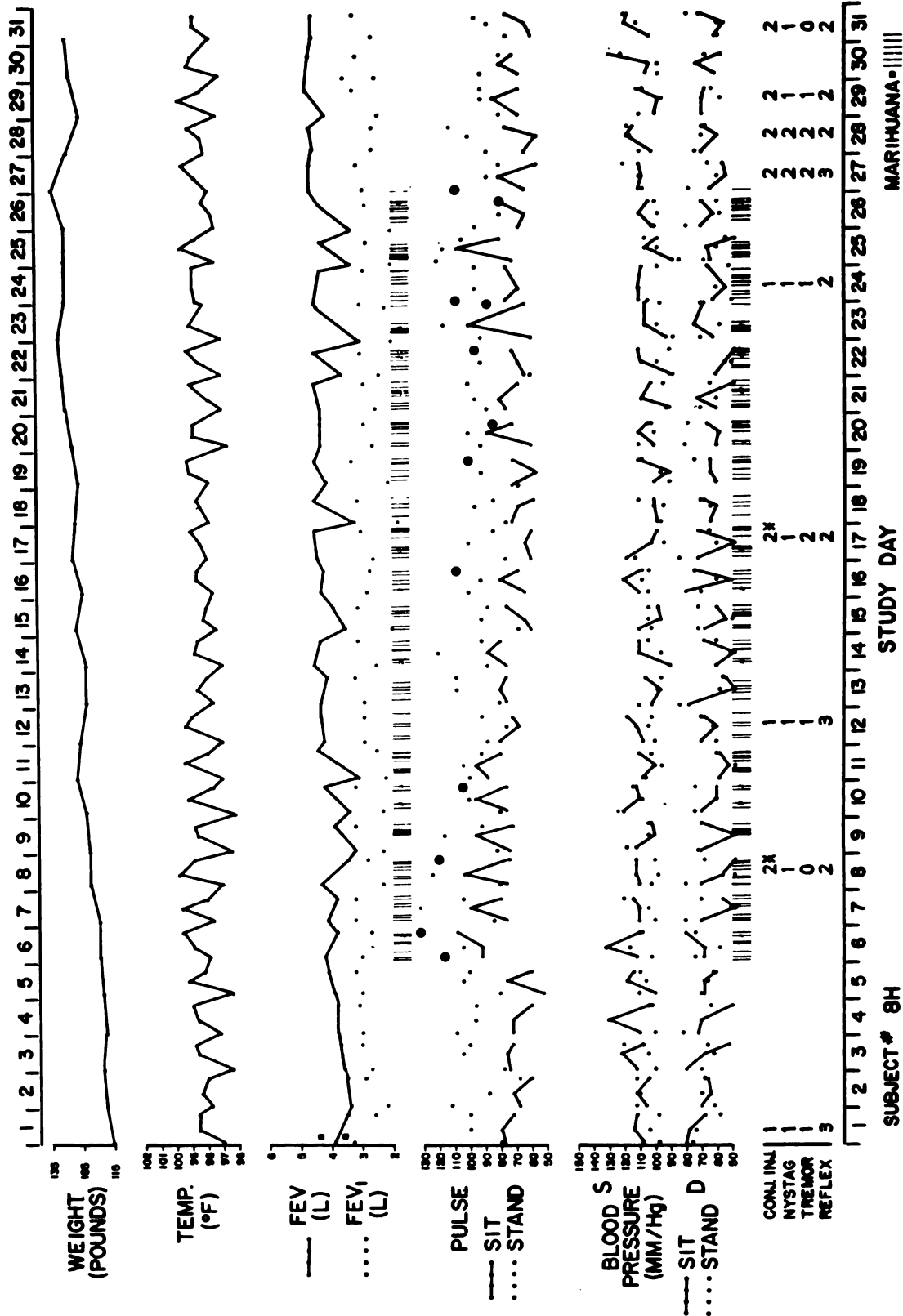


Fig. 19b

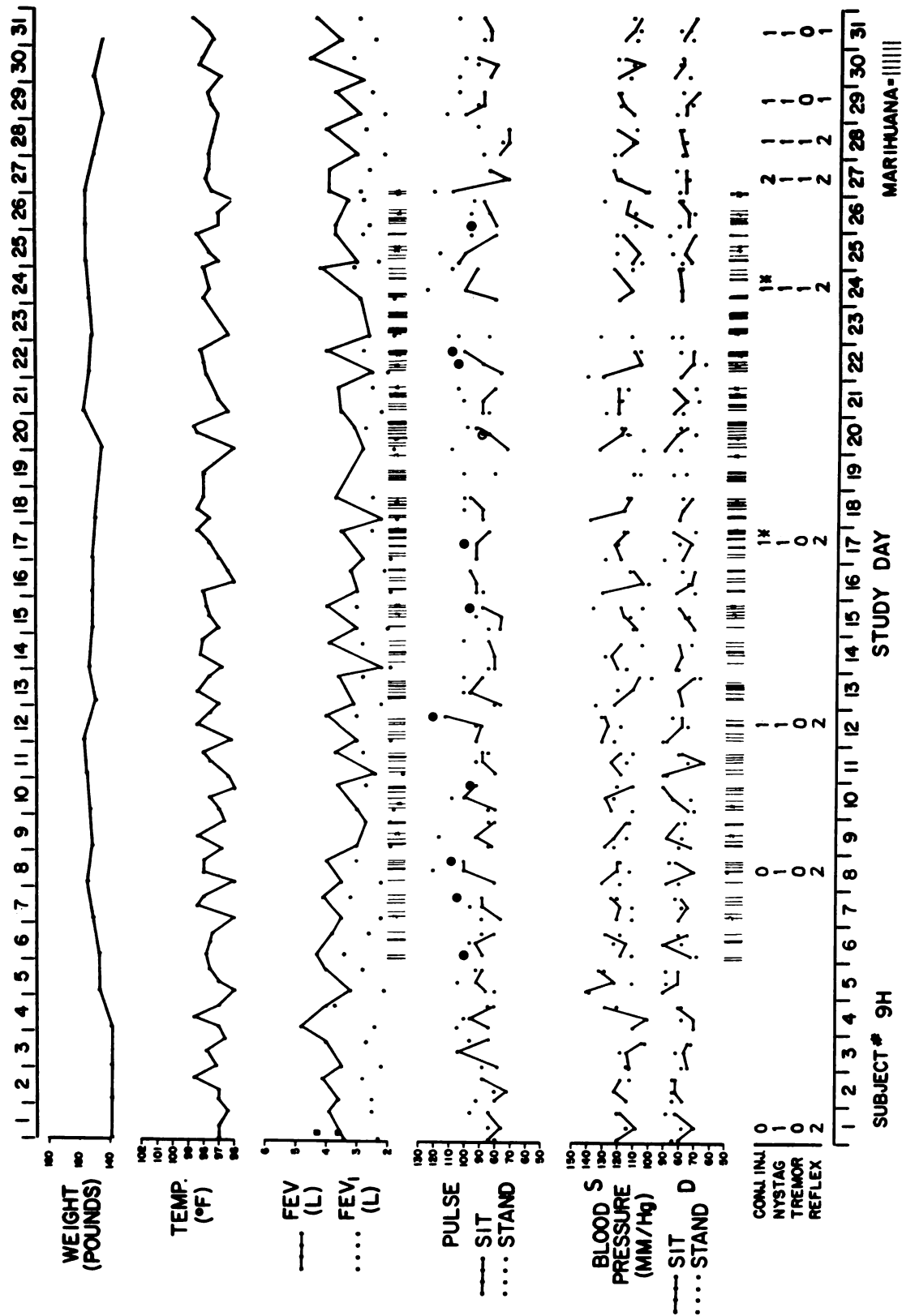


Fig. 20b

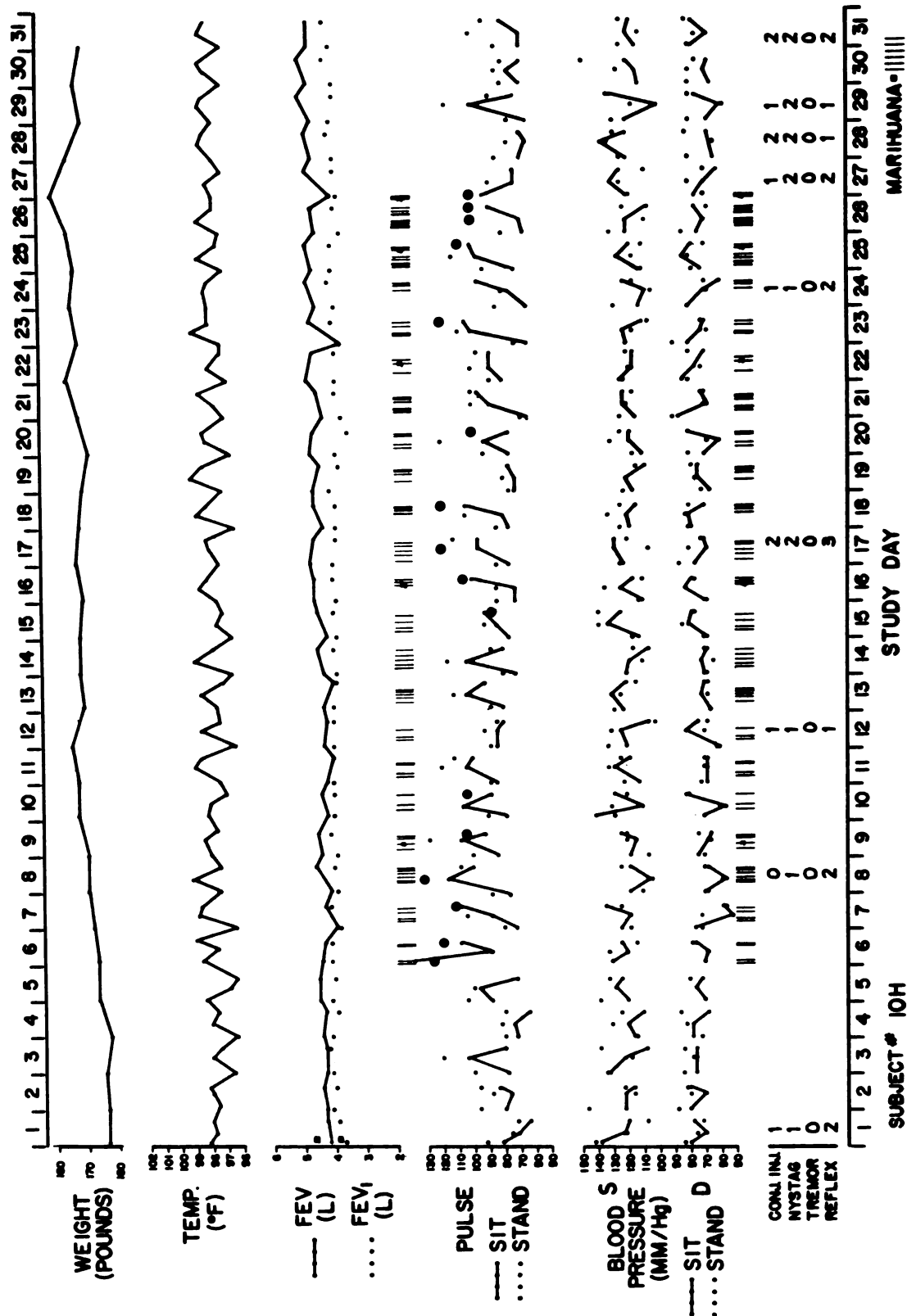


Fig. 1c

A=FATIGUE C=COGNITIVE LOSS E=ANXIETY G=FRIENDLY
 B=GUILT-SHAME D=HOSTILITY F=DEPRESSION H=CAREFREE

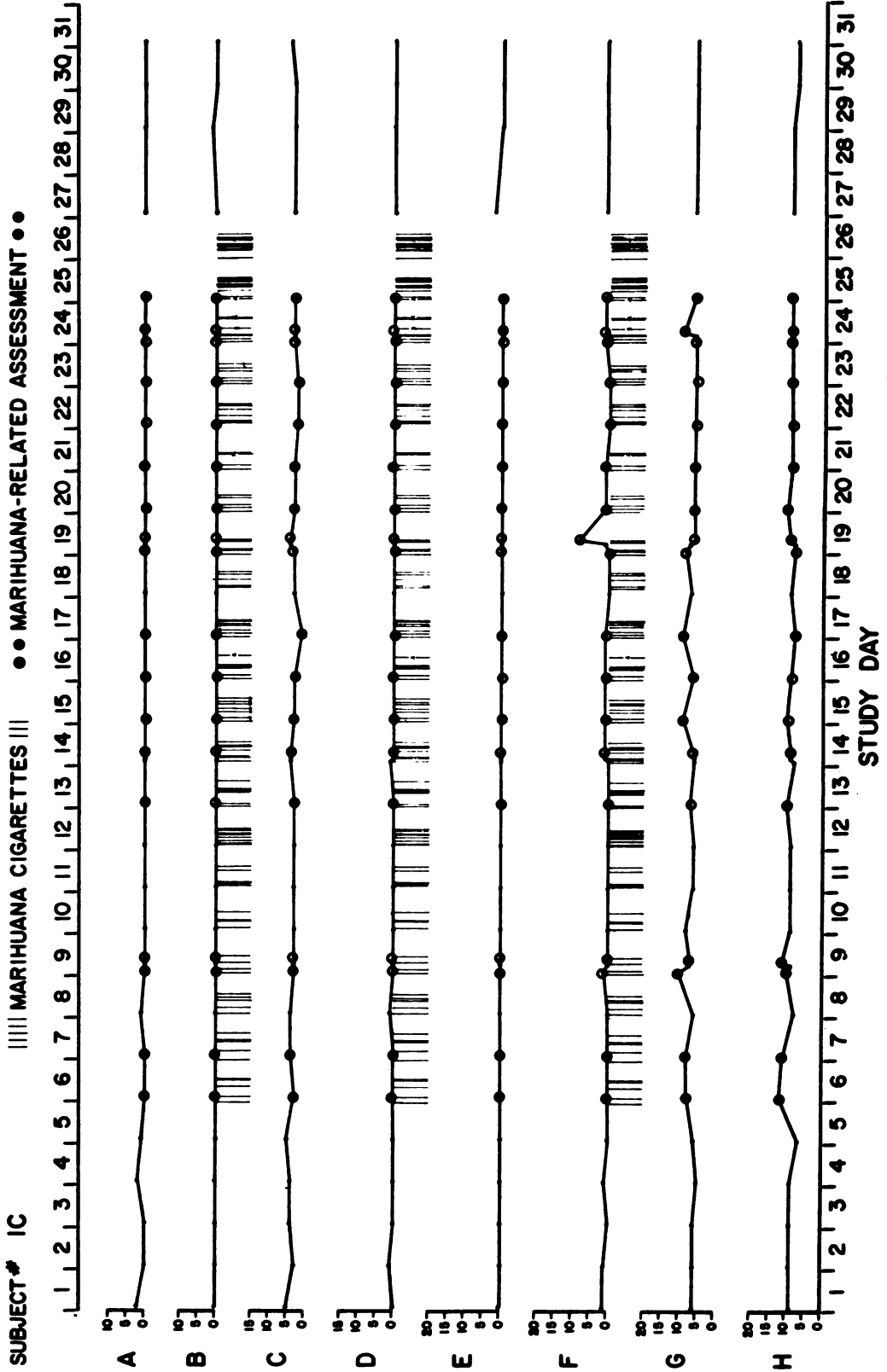


Fig. 2c

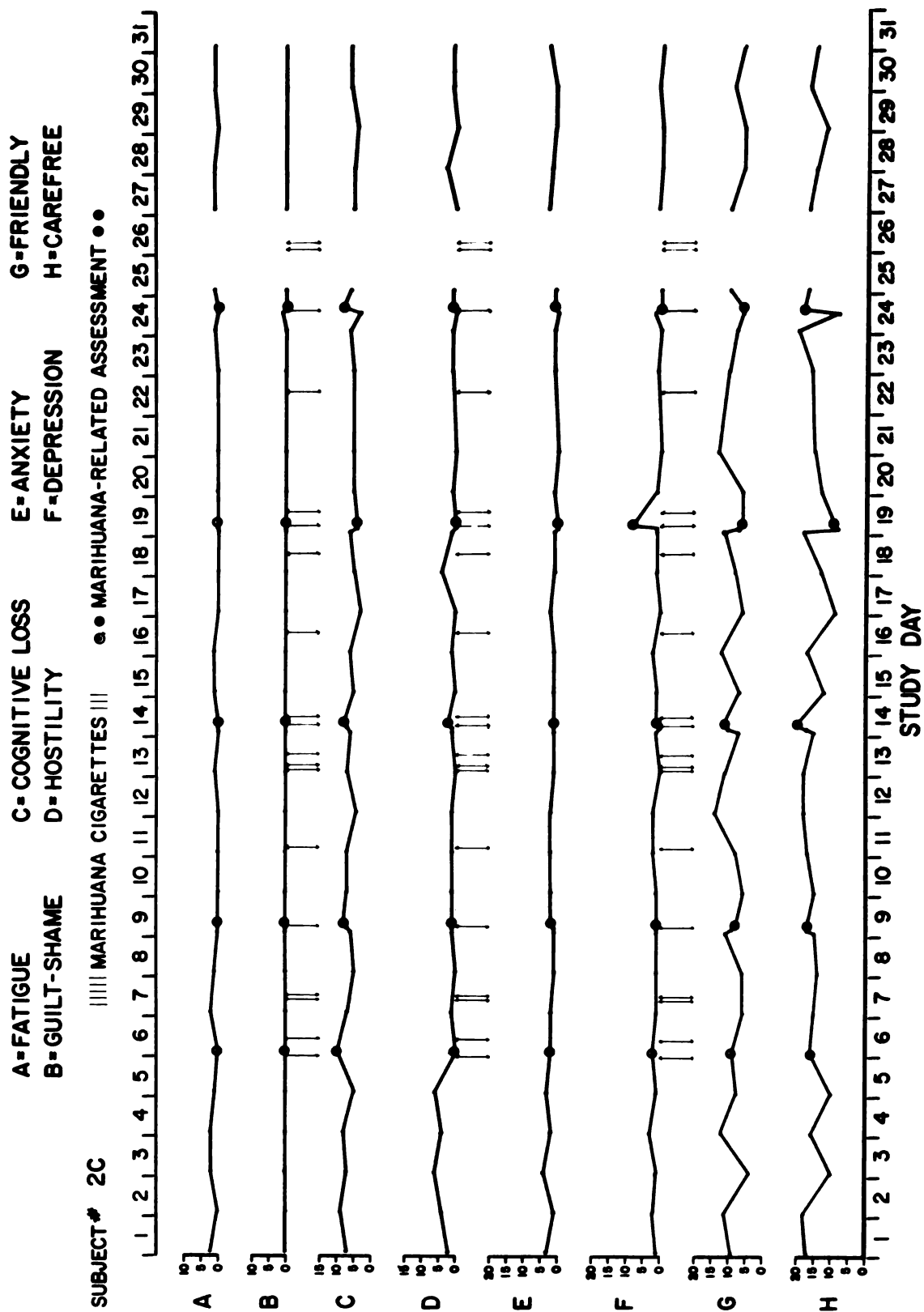


Fig. 3c

A=FATIGUE C=COGNITIVE LOSS E=ANXIETY G=FRIENDLY
 B=GUILT-SHAME D=HOSTILITY F=DEPRESSION H=CAREFREE

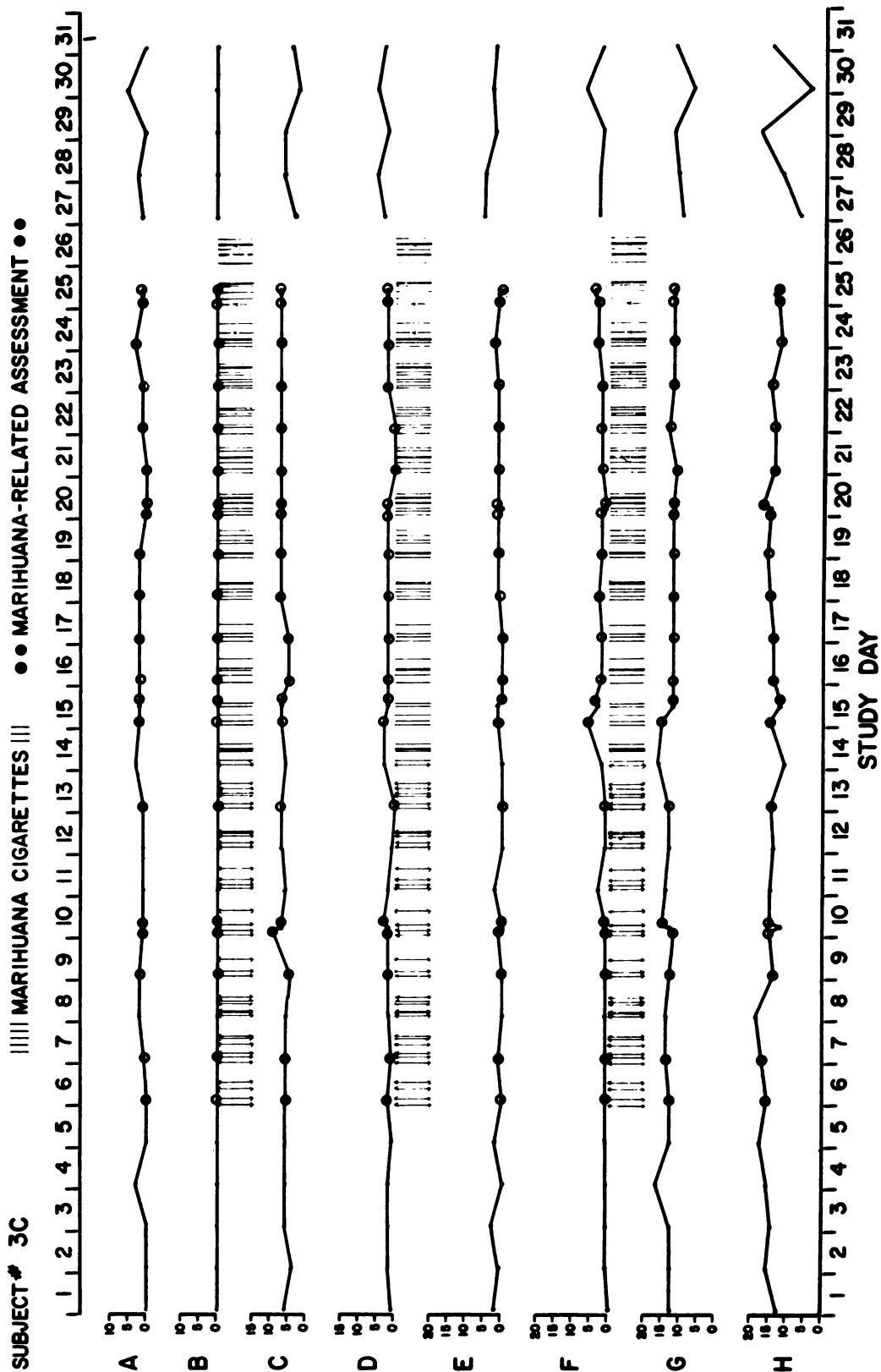


Fig. 4c

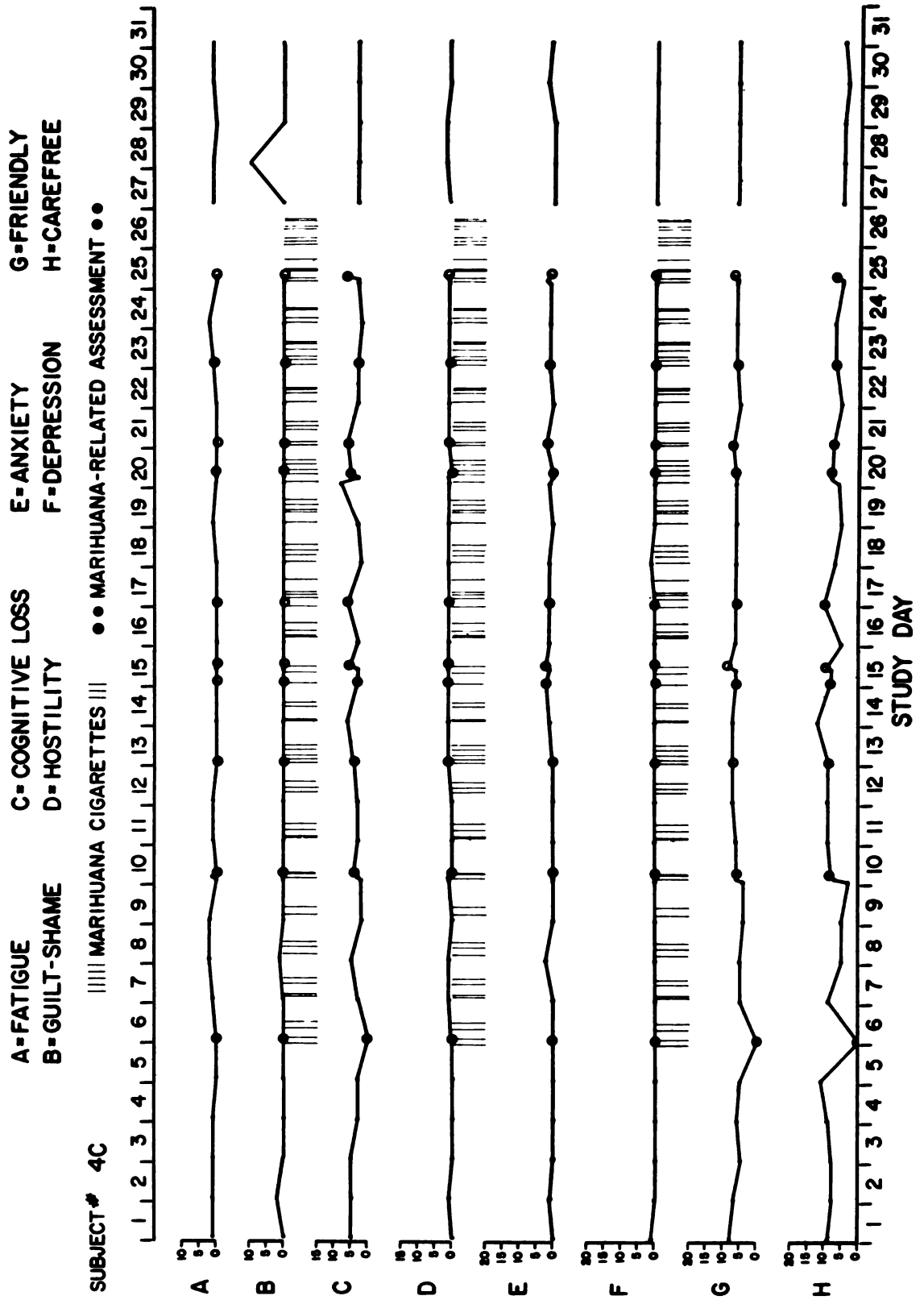


Fig. 5c

A=FATIGUE C=COGNITIVE LOSS E=ANXIETY G=FRIENDLY
 B=GUILT-SHAME D=HOSTILITY F=DEPRESSION H=CAREFREE

SUBJECT# 5C ||||| MARIHUANA CIGARETTES ||| ●● MARIHUANA-RELATED ASSESSMENT ●●

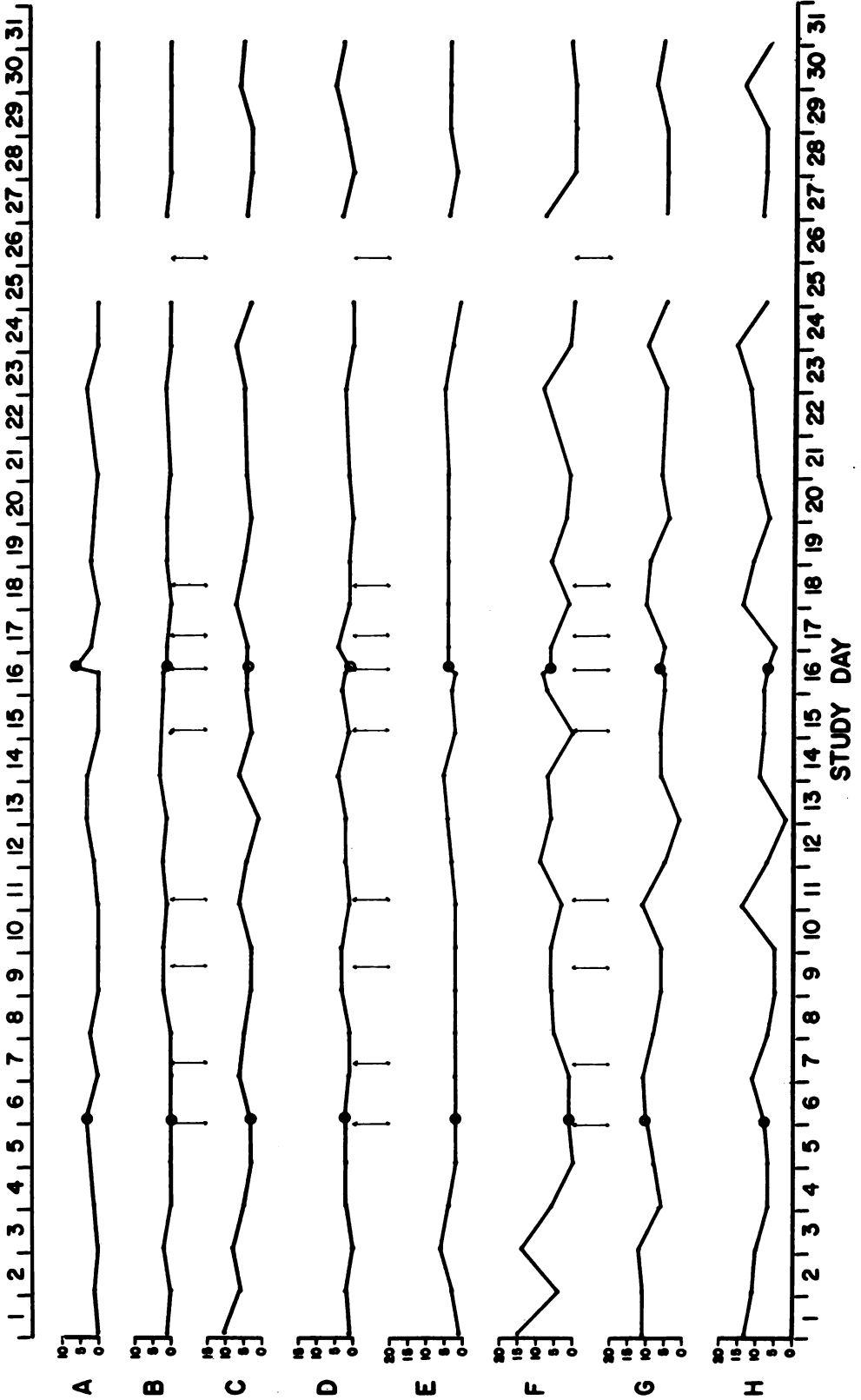
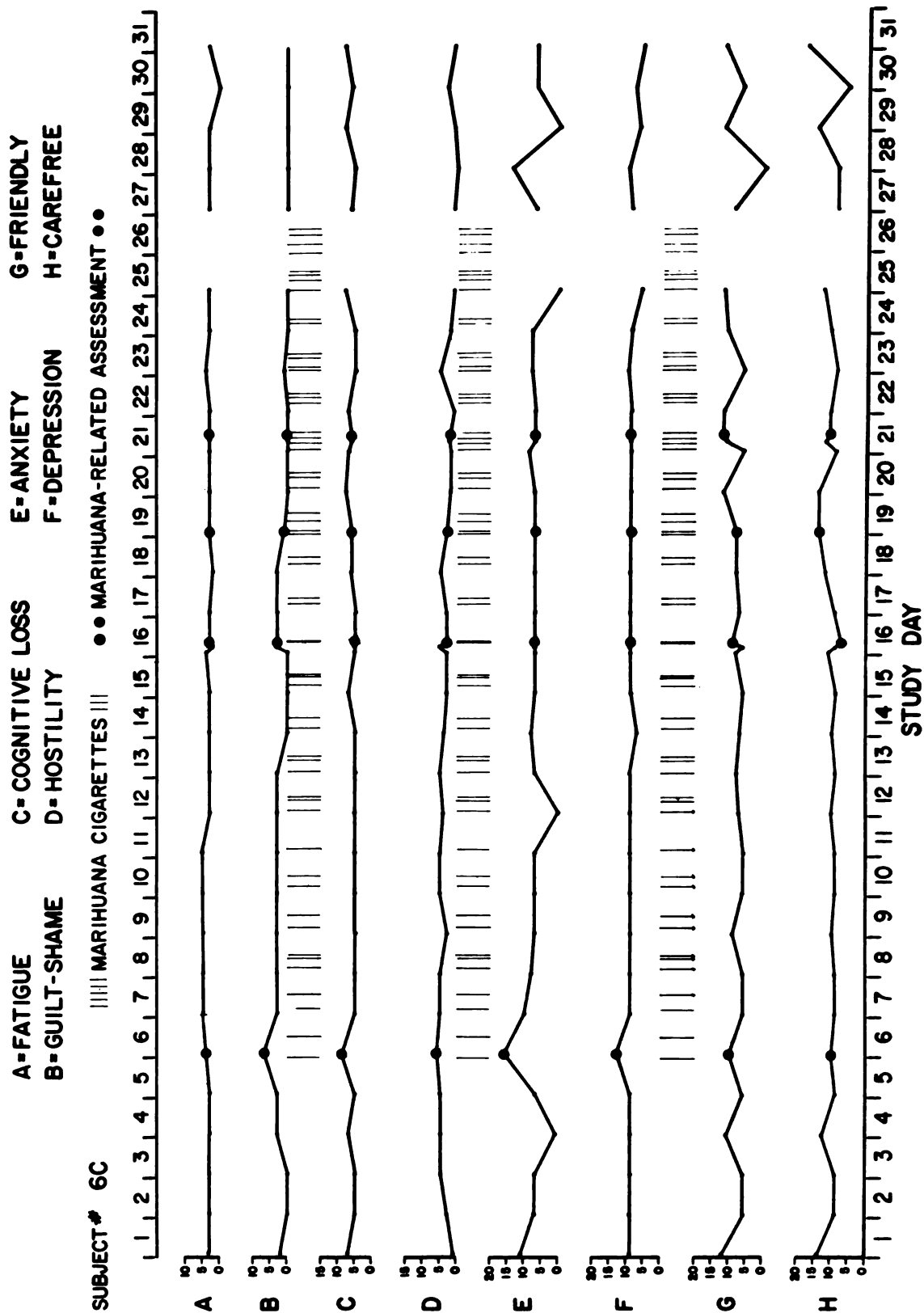


Fig. 6c



A=FATIGUE C=COGNITIVE LOSS E=ANXIETY G=FRIENDLY
 B=GUILT-SHAME D=HOSTILITY F=DEPRESSION H=CAREFREE

SUBJECT # 7C

||||| MARIHUANA CIGARETTES ||| ●● MARIHUANA-RELATED ASSESSMENT ●●

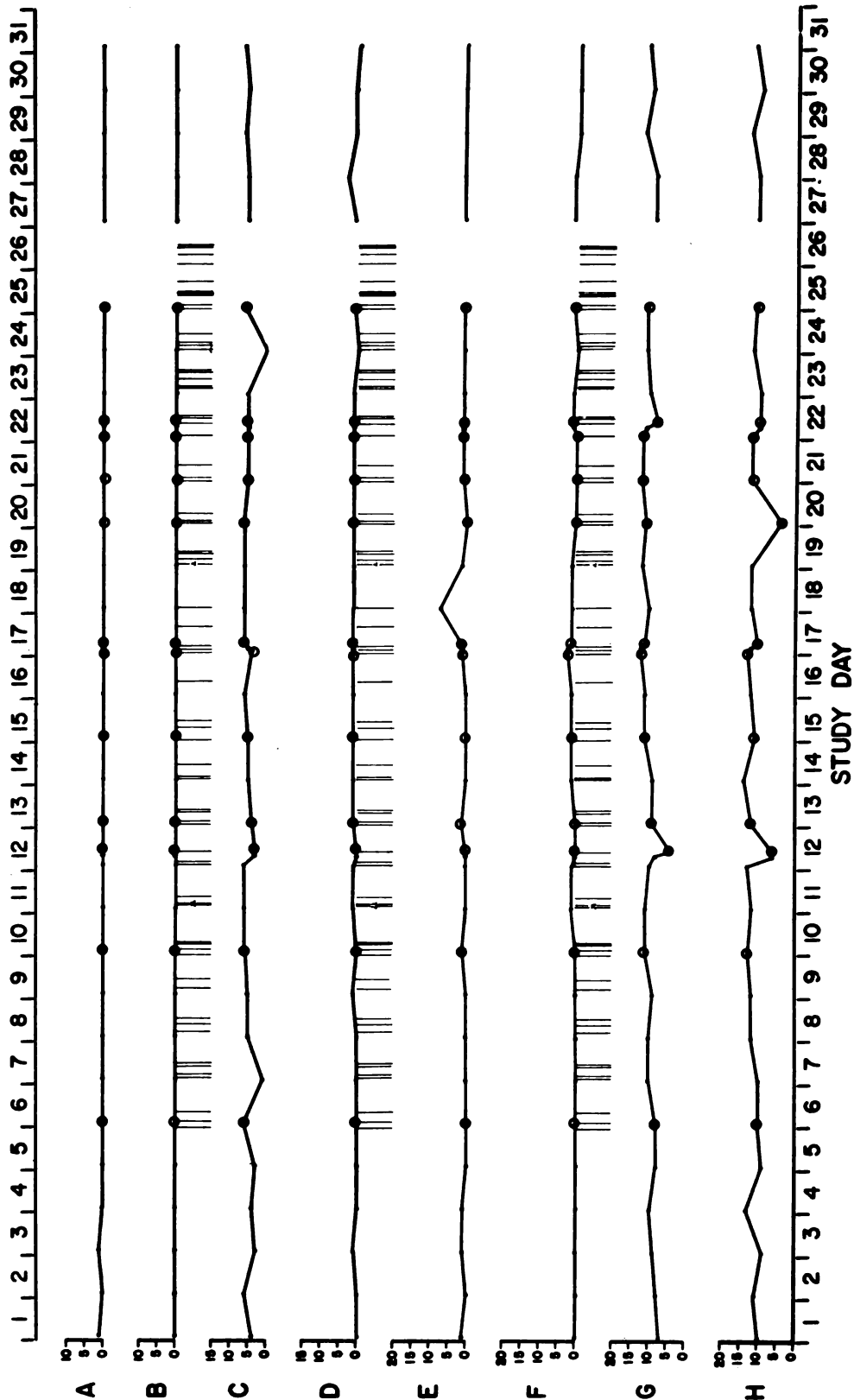


Fig. 8c

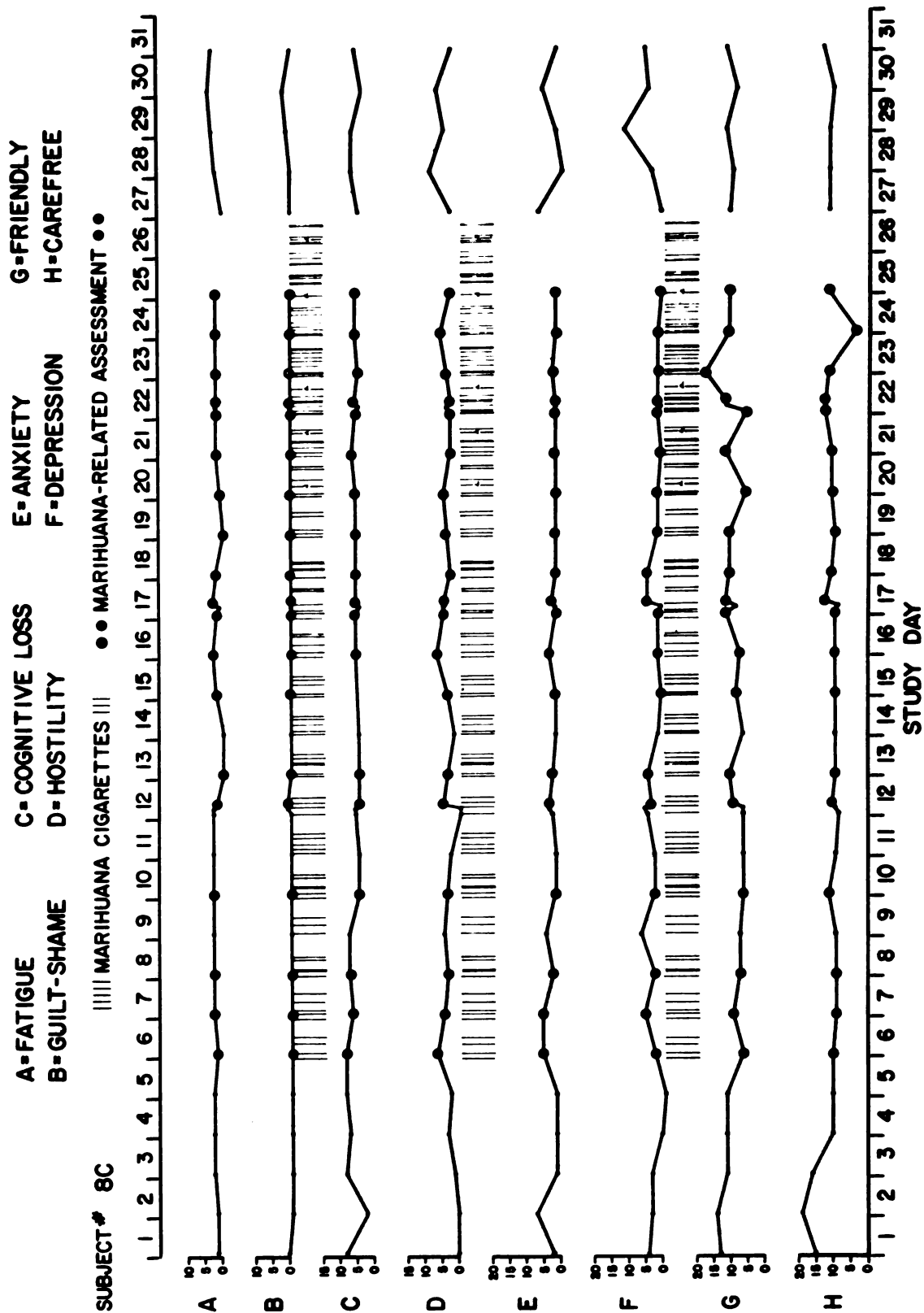


Fig. 9c

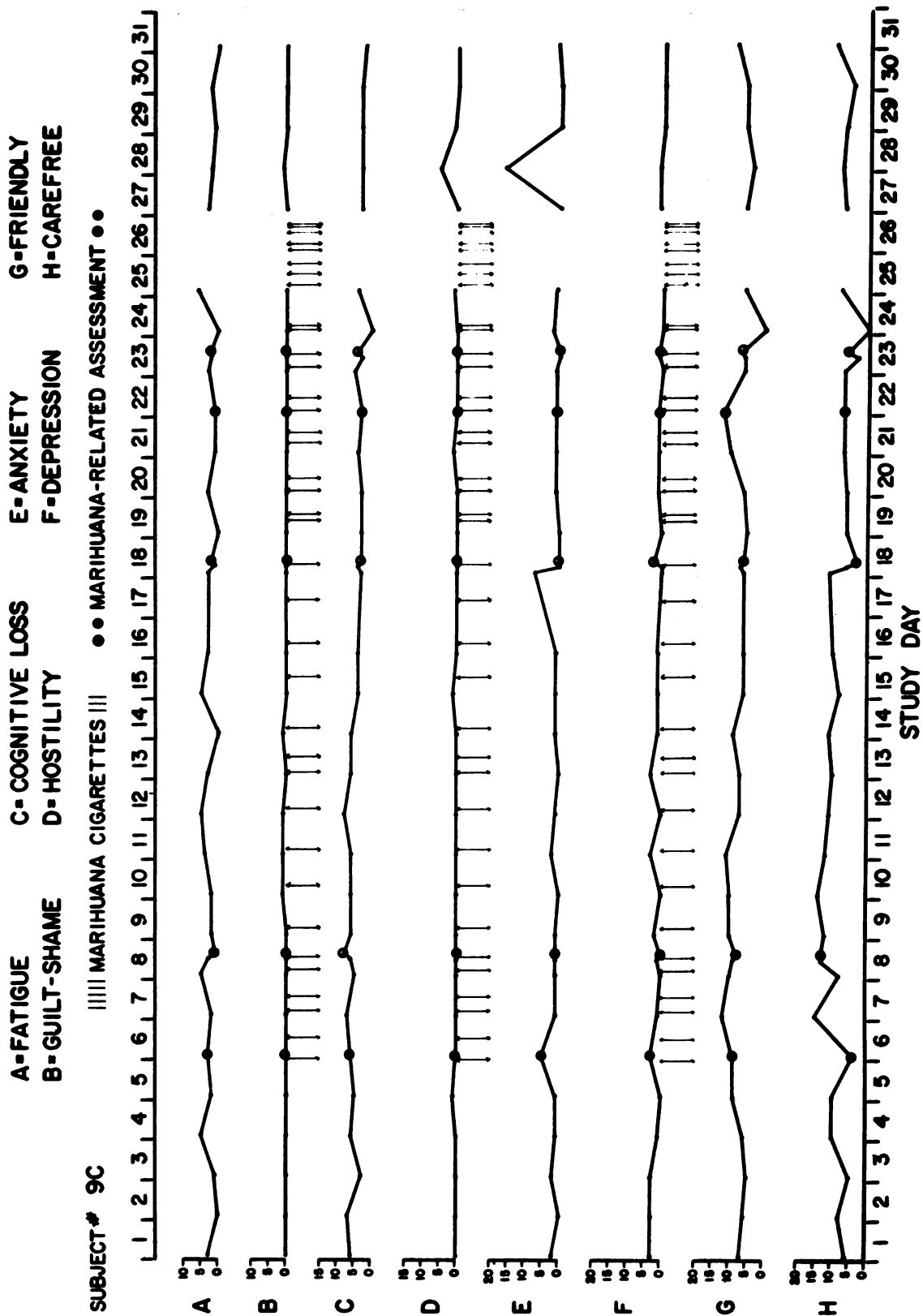
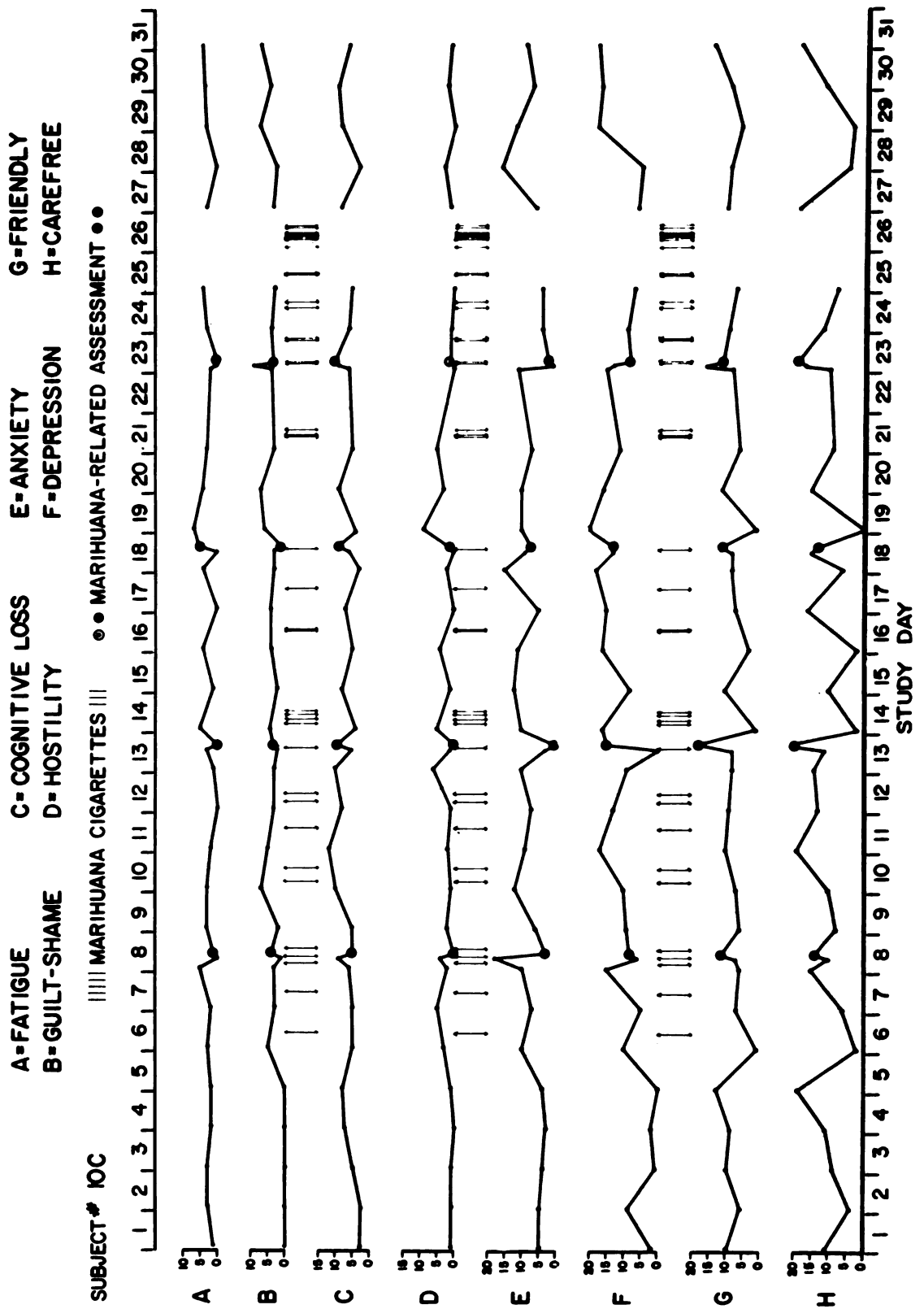


Fig. 10c



A=FATIGUE C= COGNITIVE LOSS E= ANXIETY G=FRIENDLY
 B= GUILT-SHAME D= HOSTILITY F= DEPRESSION H= CAREFREE

||||| MARIHUANA CIGARETTES ||| ●● MARIHUANA-RELATED ASSESSMENT ●●

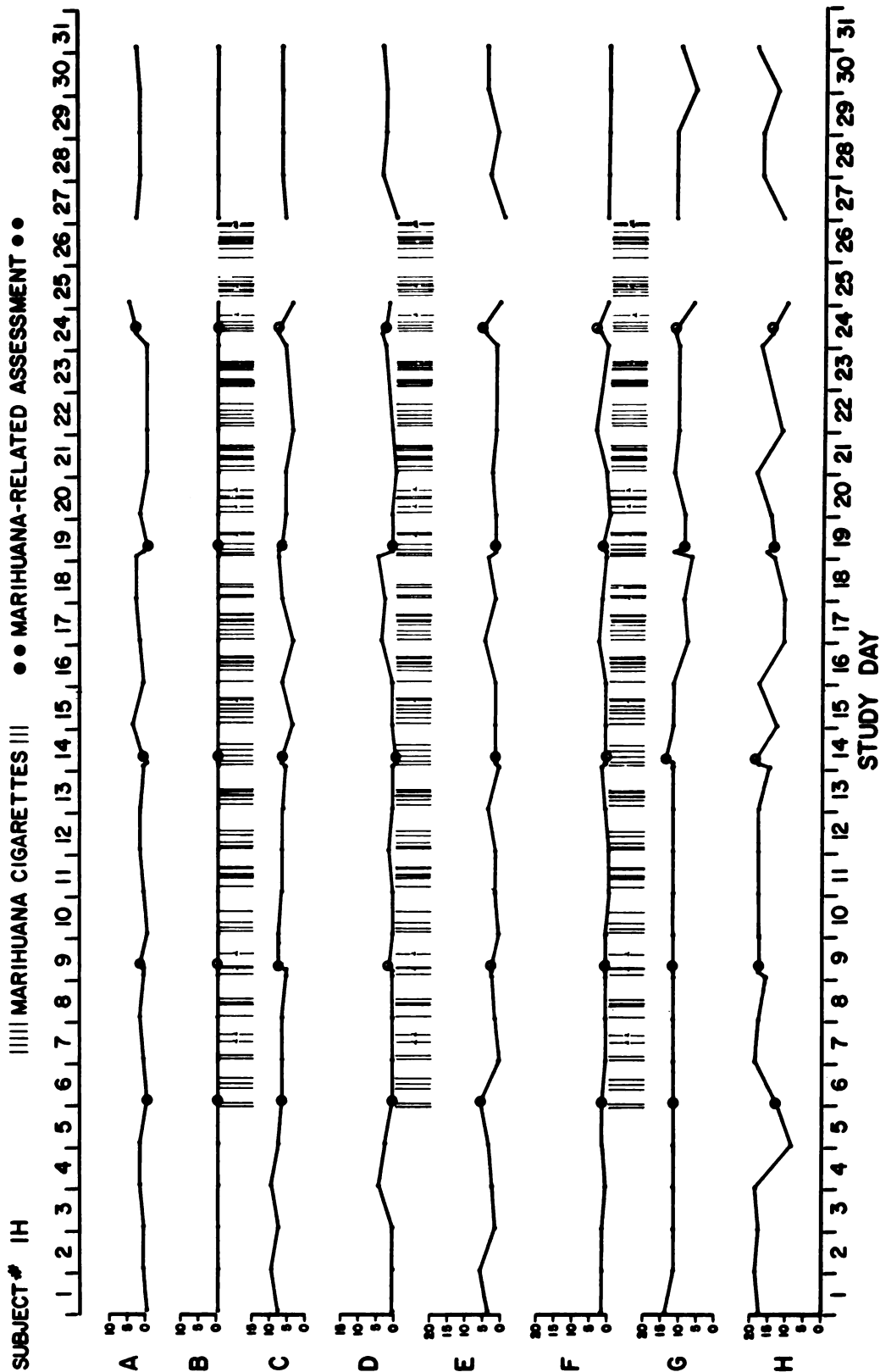


Fig. 12c

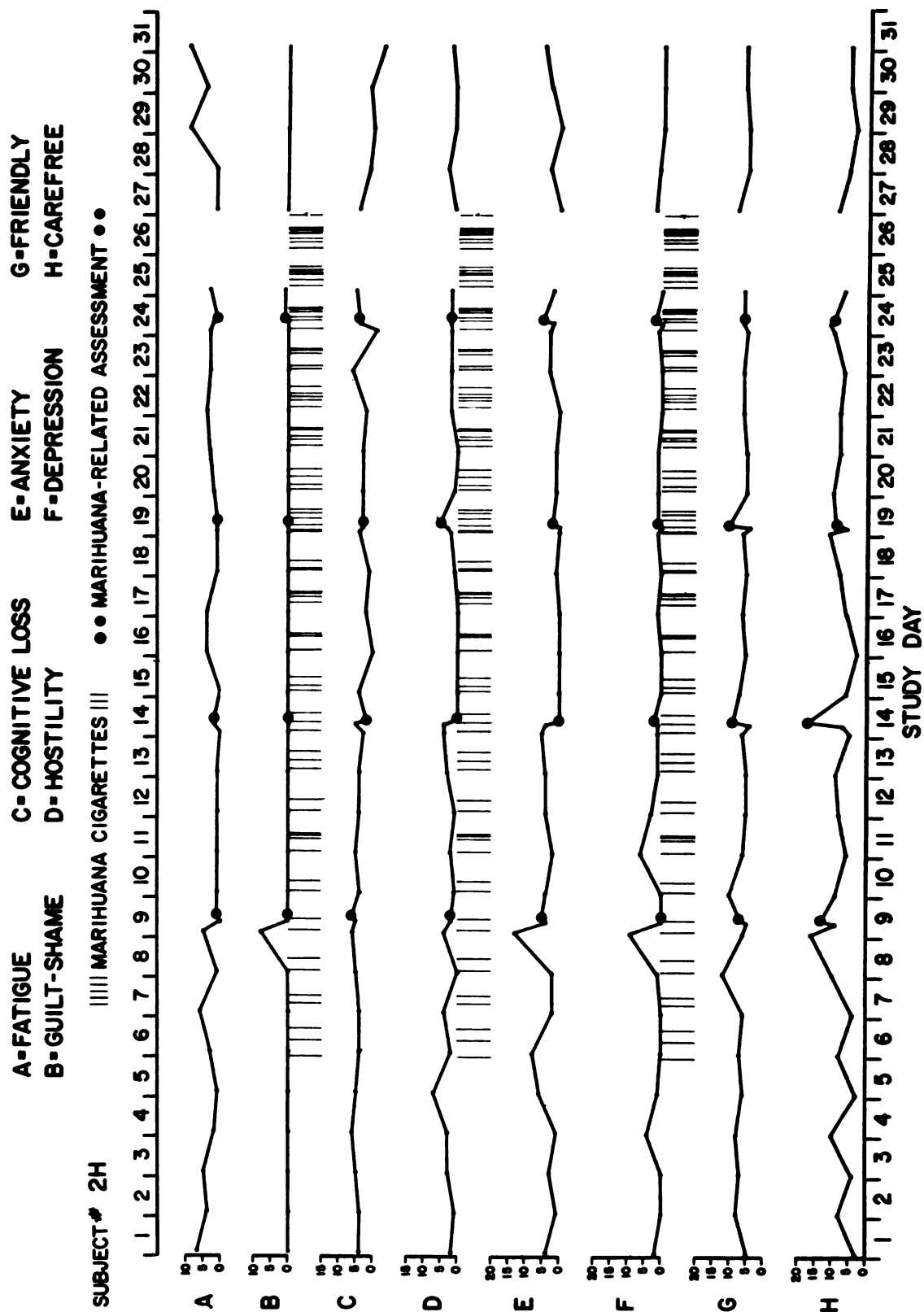


Fig. 13c

A=FATIGUE C=COGNITIVE LOSS E=ANXIETY G=FRIENDLY
 B=GUILT-SHAME D=HOSTILITY F=DEPRESSION H=CAREFREE

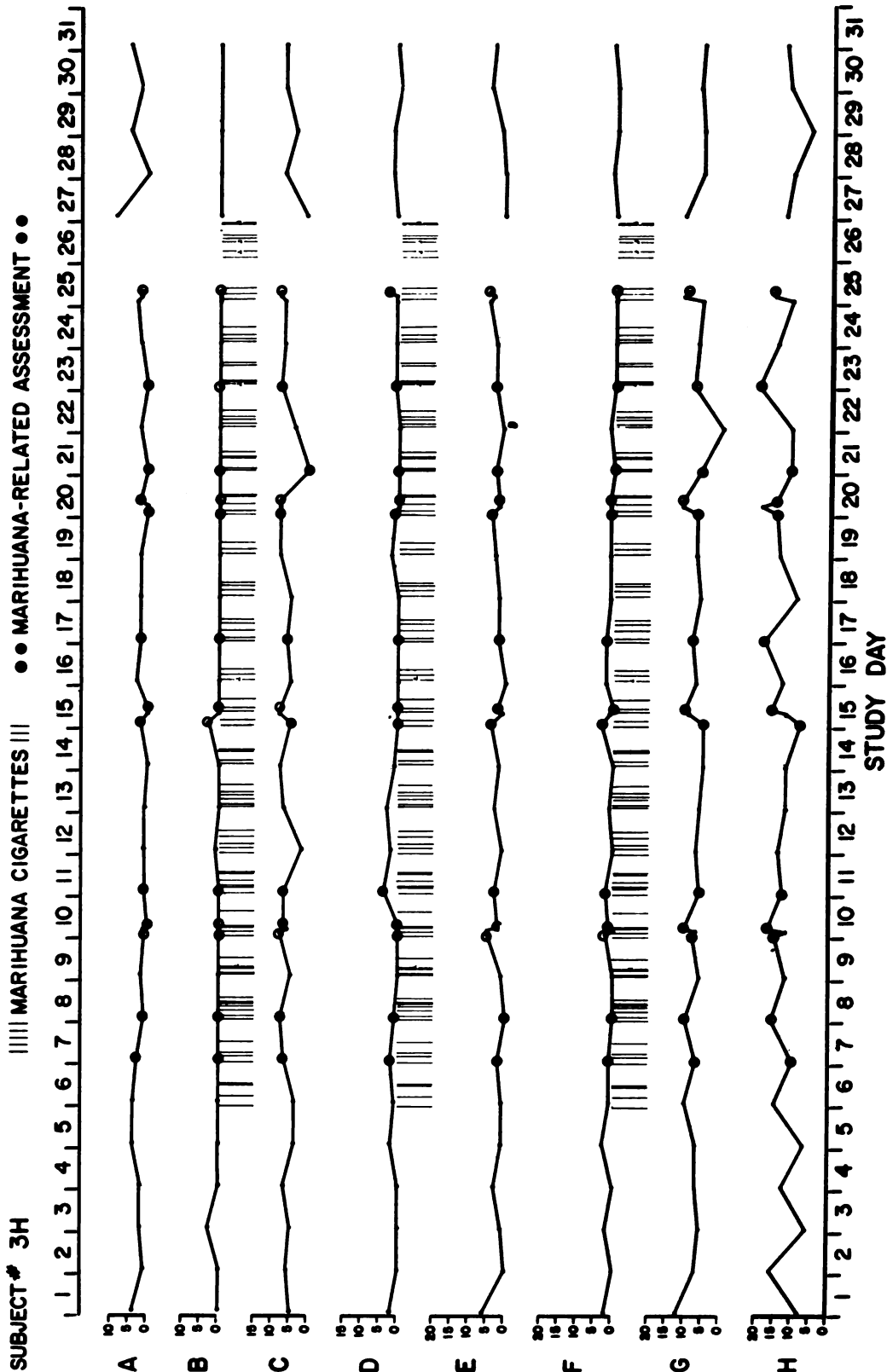


Fig. 14c

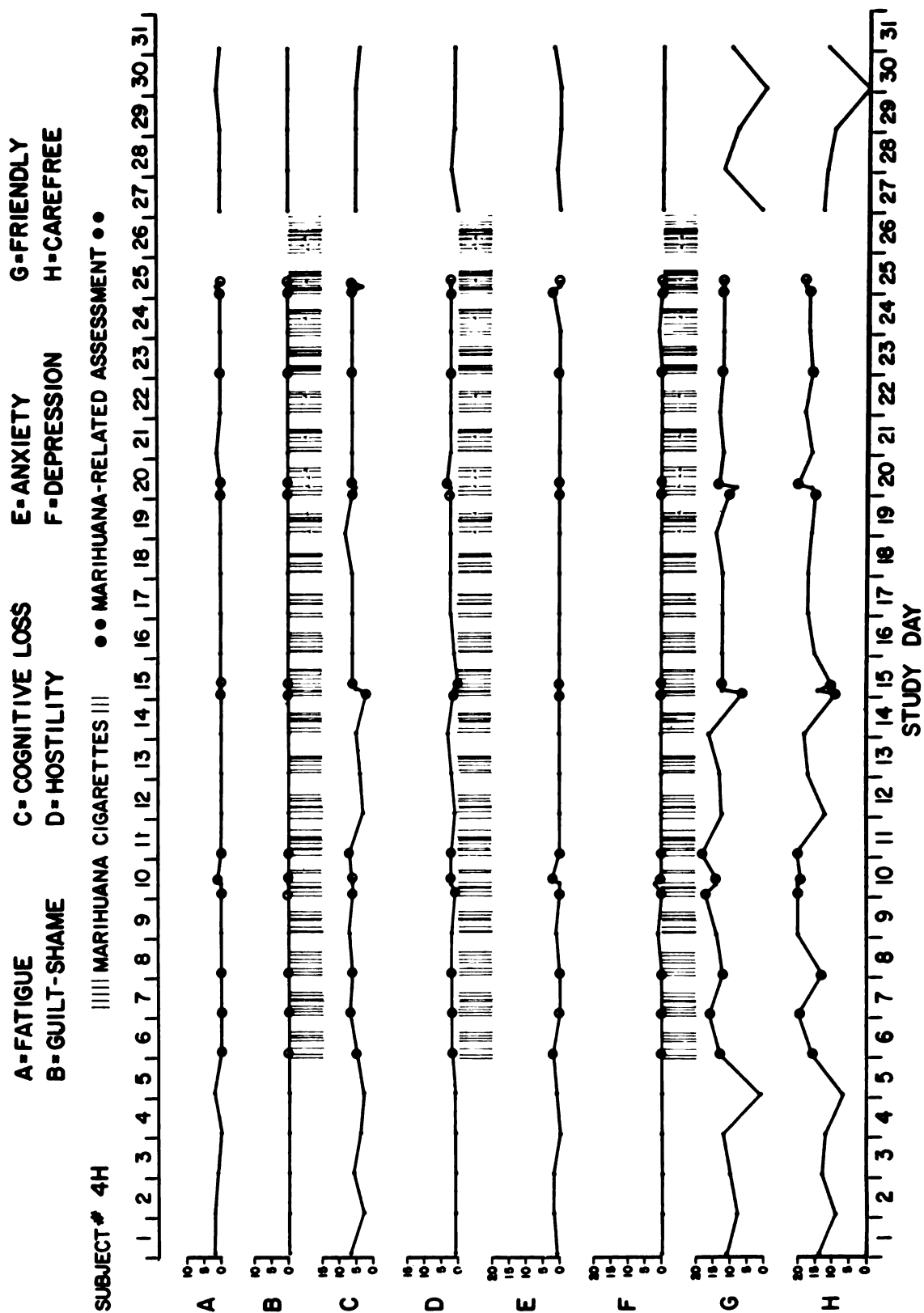


Fig. 15c

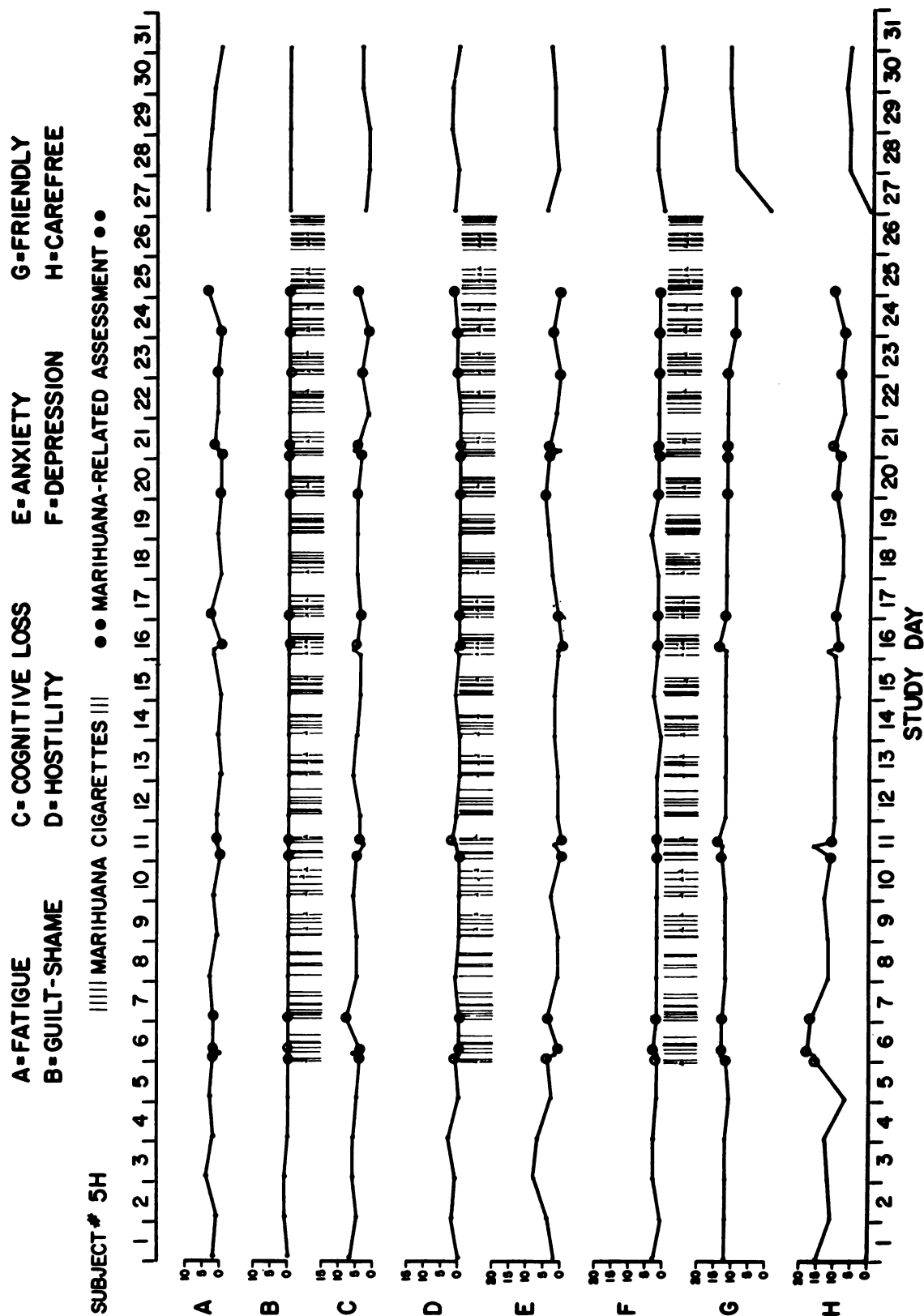
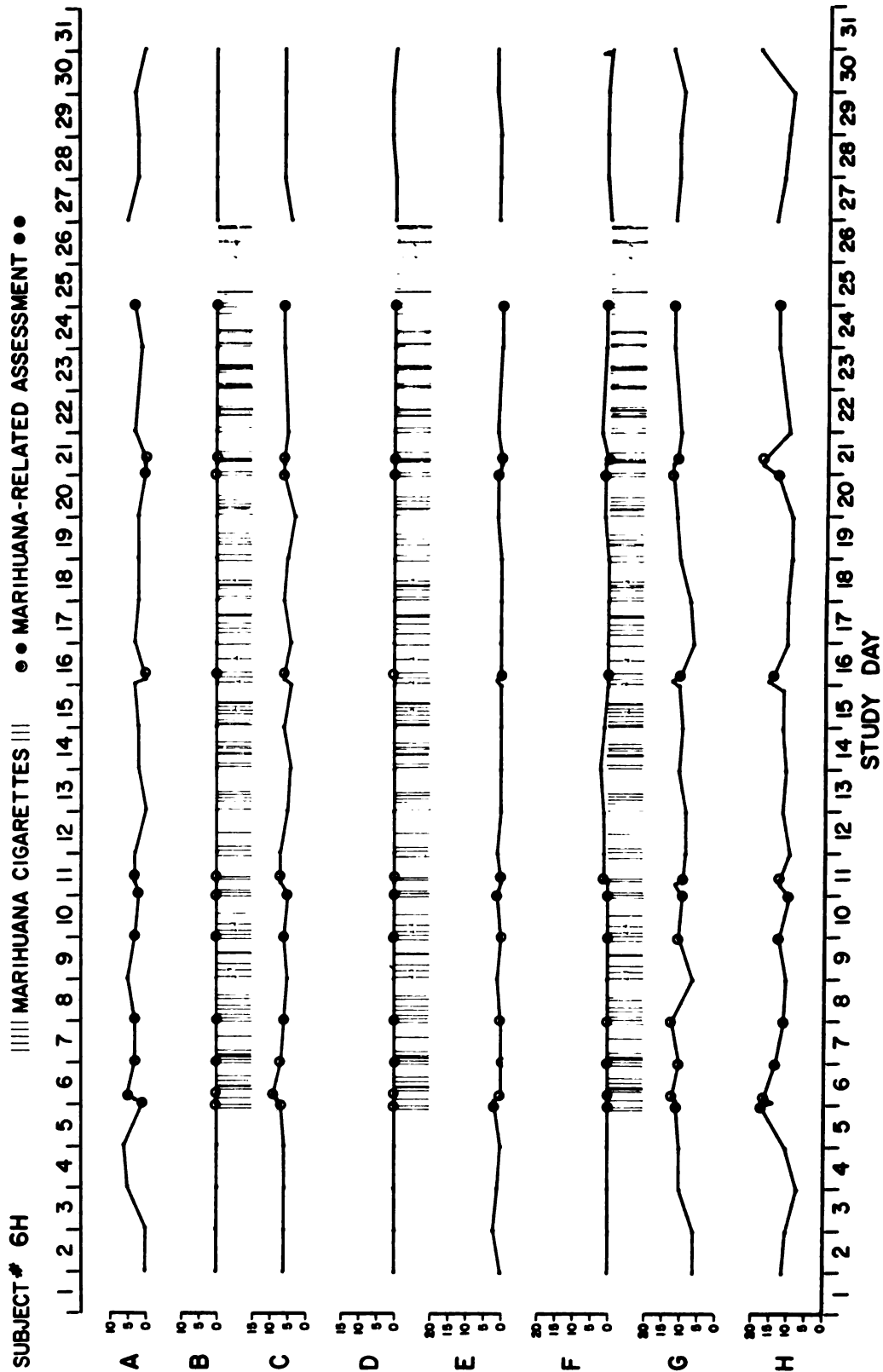


Fig. 16c

A=FATIGUE C=COGNITIVE LOSS E=ANXIETY G=FRIENDLY
 B=GUILT-SHAME D=HOSTILITY F=DEPRESSION H=CAREFREE



A=FATIGUE C= COGNITIVE LOSS E=ANXIETY G=FRIENDLY
 B=GUILT-SHAME D= HOSTILITY F=DEPRESSION H=CAREFREE

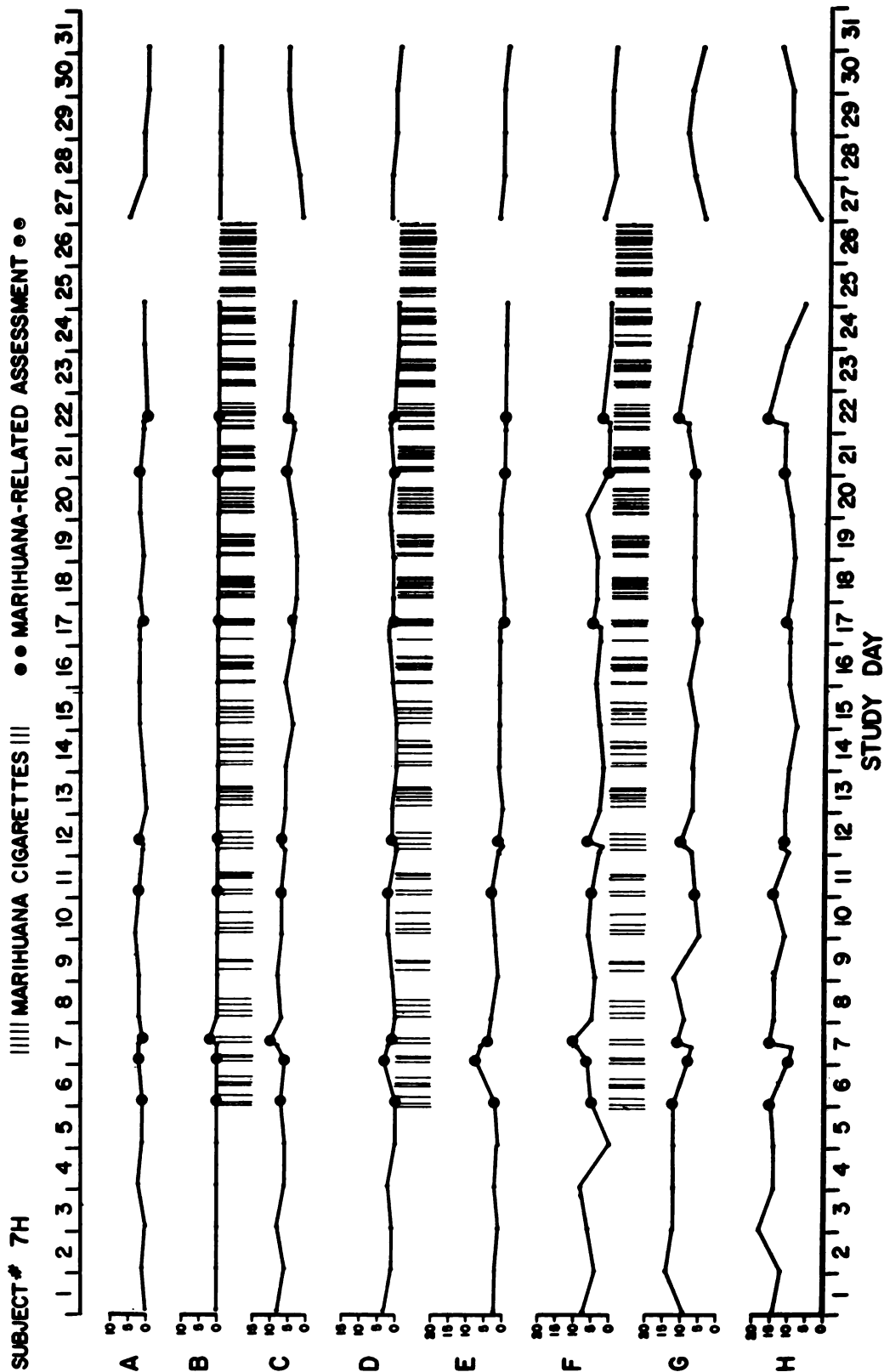
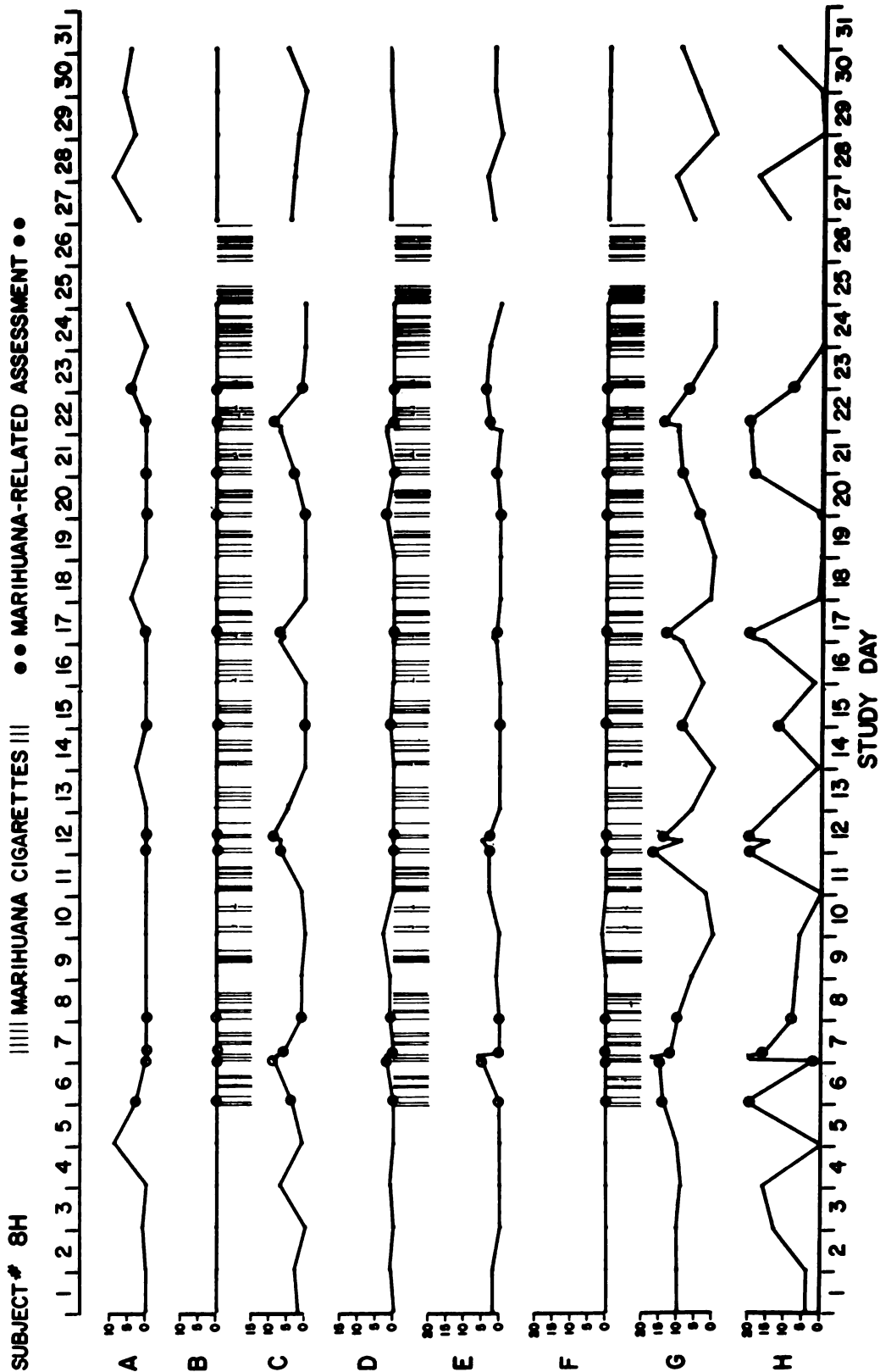


Fig. 18c

A=FATIGUE C=COGNITIVE LOSS E=ANXIETY G=FRIENDLY
 B=GUILT-SHAME D=HOSTILITY F=DEPRESSION H=CAREFREE



A=FATIGUE C=COGNITIVE LOSS E=ANXIETY G=FRIENDLY
 B=GUILT-SHAME D=HOSTILITY F=DEPRESSION H=CAREFREE

SUBJECT # 9H ||||| MARIHUANA CIGARETTES ||| ●● MARIHUANA-RELATED ASSESSMENT ●●

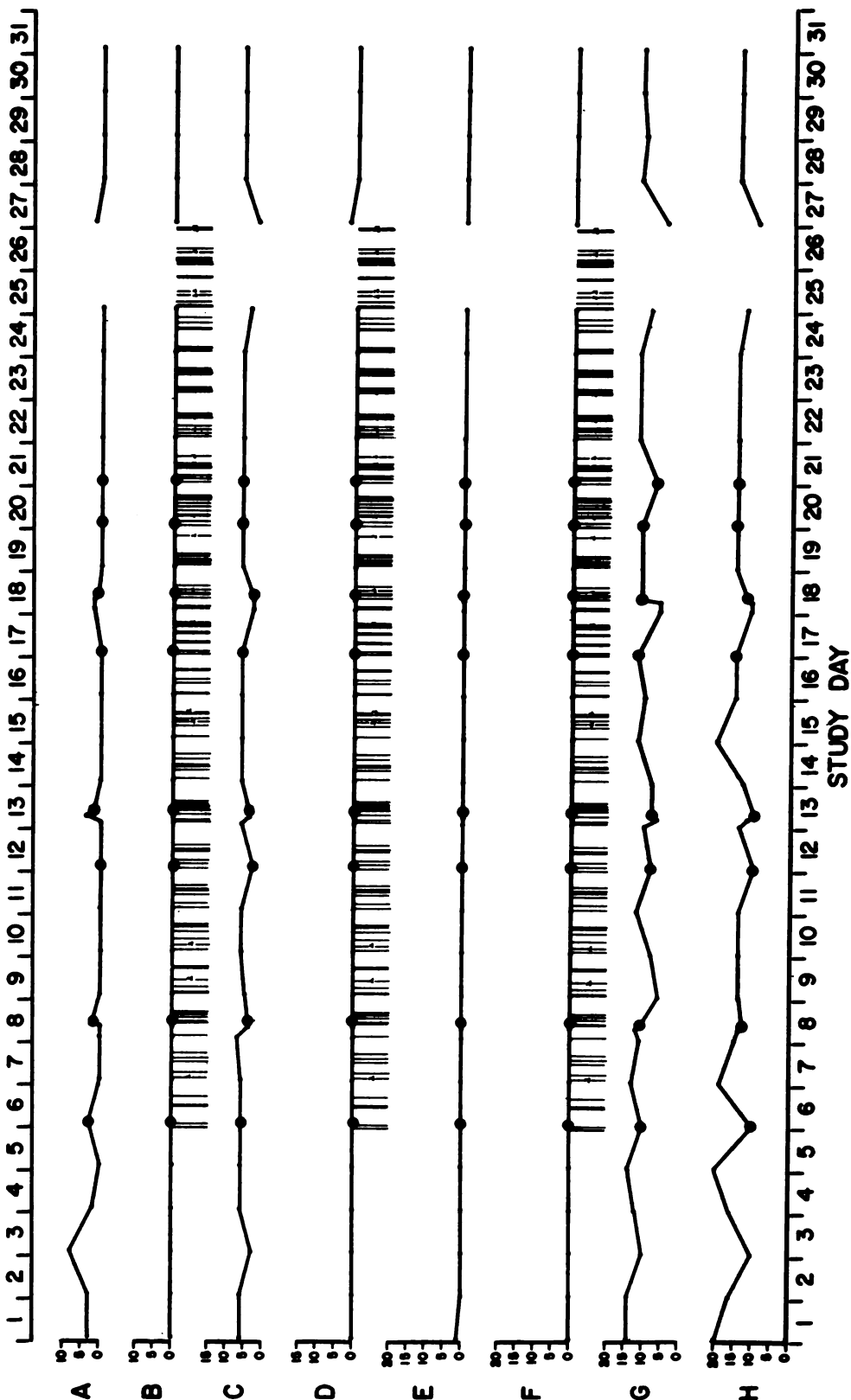
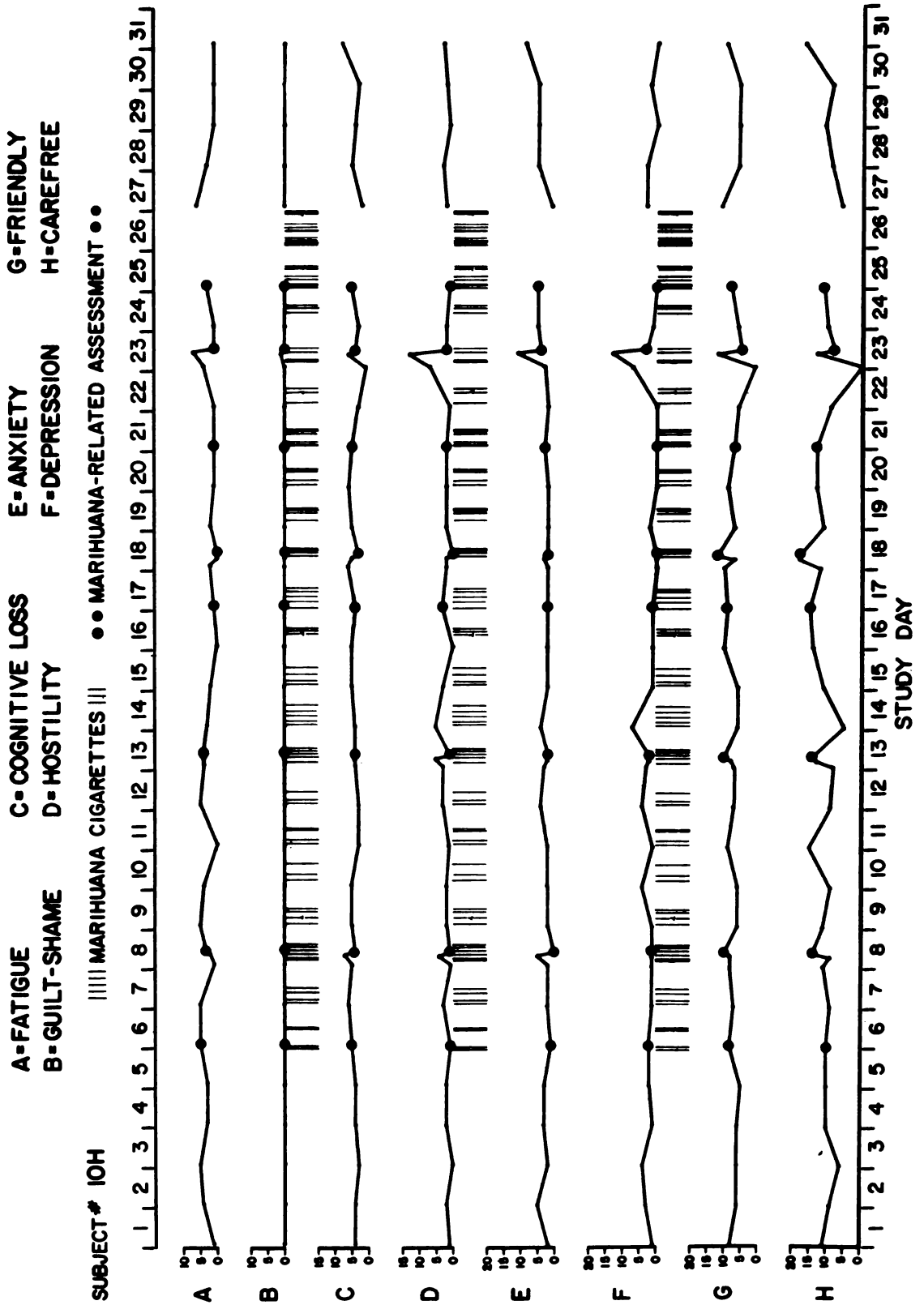


Fig. 20c



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BEHAVIORAL AND BIOLOGICAL CONCOMITANTS OF CHRONIC MARIHUANA
SMOKING BY HEAVY AND CASUAL USERS

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part two social aspects

I. Marihuana Use in American Society

Approximately 35 years ago, the use of marihuana in the United States was defined as a social problem of major proportions. At that time, its use as an intoxicant in this country was limited for the most part to jazz musicians, artists, literary figures, merchant seamen, miners, ranchhands, farm laborers and other individuals defined as social "outsiders" or marginal types. Many of these persons were drawn from minority group, lower socioeconomic segments of the society (Becker, 1963).

In the late 1920's and early 1930's, marihuana use became publicly linked to crime, violence, insanity, sexual aggression, immorality and drug addiction. In subsequent years, marihuana control legislation was passed at both the federal and state levels. Provisions for very harsh penalties reflected the belief that marihuana use was harmful to the individual and society. In retrospect we find much of the evidence purporting to establish these links was spurious, scientifically invalid or simply nonexistent (President's Commission on Law Enforcement, 1967).

Seemingly without warning, the problem of marihuana use emerged once again in the 1960's but this time in altered form. The new marihuana users, however, were quite distinct from those of earlier times. They included young men and

women from middle class families, many of whom were attending college (and later high school youth as well) who were bred in relative affluence. These were young people who, in the words of two researchers, were "educated to the ideals of individual freedom and intent on forging their own moral rules, released from parental supervision at an early age and dedicated to the serious pursuit of pleasure as well as to the satisfactions of work" (Brotman and Suffet, 1970). More and more middle and upper-middle class youth "discovered" marihuana and experimented with the drug while parents, educators, and government officials watched and worried. In the relatively short period from the thirties to the sixties, marihuana use moved from the fringe or marginal members of society, the outsiders, to youthful, educated, affluent "insiders" of the society.

Various explanations and theoretical propositions have been advanced to unravel the relatively widespread use and acceptance of marihuana by young people. At the societal level, theoretical formulations explain marihuana use as being related to alienation among the young. In this explanation, marihuana is posited as being an outward sign of youthful rebellion against authority. At the interactional level, marihuana use is described as behavior related primarily to conform-

ity to peer group expectations. At the individual level, marihuana use has variously been described as a means of coping with emotional problems, as a means of reducing anxiety, as an aspect of youthful curiosity and as part of youth's search for "kicks" or new experiences.

Numerous and diverse consequences attendant to marihuana use have been described. Most individuals who use or have used marihuana describe a feeling of mild euphoria or intoxication that is perceived as pleasurable. Some persons have stated that marihuana use increases the user's chances of "dropping out" of society or "dropping down" in terms of not achieving at his level of potential. Others are concerned that marihuana use increases the chances of experimenting with other and more dangerous drugs and although the numbers seem to have declined within recent years, a considerable segment of the American public still believes that marihuana produces addiction and leads to heroin, causes crime, can cause death and makes people lose their desire to work.

Discussion of marihuana inevitably involves a consideration of the demographic as well as the behavioral correlates of marihuana use. Thus, the question of who uses marihuana? Under what circumstances and why? How does the process of becoming a marihuana user take place? and Under what circumstances is use sustained or discontinued? What is the nature of marihuana use as well as the incidence of use? These and related questions are central to any consideration of the issue of marihuana use.

What must be understood is the overwhelming importance of social and cultural forces operating in all drug use. Human behavior in relation to drugs occurs only within specific social settings which themselves determine the form that behavior will take, and not the drug itself. People do not "escalate" from the use of marihuana to more dangerous drugs because of any property resting within the chemistry of marihuana itself. If and when escalation does occur, it is a function of the kinds of people who use these drugs, their attitudes and values, their friendship networks, activities related to drug use and other related circumstances. Whether we are considering the individual who has just been initiated to marihuana use or the multi-drug user, we must bear in mind that people differently located in the social structure, acting out different roles in society, will "escalate" at different rates. In this process it is not the drug acting on the body which produces the changes which occur, but other people acting on their behavior.

In this Chapter, we will assess the extent of

marihuana use, review the process of becoming a marihuana user, identify certain reasons why individuals do or do not use marihuana, and describe the characteristics of the users and their patterns of use.

Surveys of Marihuana Use

Since the mid-sixties, numerous polling organizations, independent research groups, school officials and other interested parties have attempted to determine the extent of marihuana use in American society, to identify the patterns of use in terms of frequency, intensity and duration, to discover the attitudinal and behavioral correlates of marihuana use and to develop a profile of the marihuana user.

Between 1965 and 1971, more than one hundred surveys relating to marihuana use have been conducted, but large differences in the populations addressed, the survey and sampling methods utilized and the terminology and operational definitions employed have precluded precise comparison of their results. Perhaps surprisingly, however, while any one survey is likely to provide a point estimation of ever or current use of marihuana two or five or ten times greater than that found in another survey of a roughly similar population (college students, for example), more careful sorting and analysis of several such surveys indicate the existence of patterns and regularities along several dimensions.

The seeming inconsistencies in the findings obtained from a survey by survey approach directed the Commission staff to a kind of aggregate analysis of three broad classes of surveys: those of the general population; those of college students and those of junior and senior high school students. Emphasis was placed on the gross similarities in their findings according to a selected set of variables shown repeatedly to be significantly correlated with marihuana use, regardless of the variations in sampling procedures, survey techniques, response rate and sample size.

Even with these limitations, however, large and sometimes irreconcilable differences in terminology and operational definitions precluded anything but simple reporting of individual survey findings. Despite those comparative and analytical problems, however, these surveys, in the aggregate, have provided valuable descriptive data about the differential use of marihuana in American society and have provided considerable information about those who use or have used marihuana.

The Incidence and Prevalence of Marihuana Use

Almost without exception, the surveys have attempted to determine, at the least, the incidence and prevalence of marihuana use; that is, the proportion of individuals who have *ever used* and who *currently use* marihuana.

The surveys, taken together, demonstrate significant overall increases, since about 1965, in the proportion of Americans who have tried marihuana at least once and those who currently use the drug. They also show, however, that substantial proportions of individuals who try the drug on one or more occasions discontinue use and that the overwhelming majority of those who have *never* tried marihuana are unlikely to experiment with it in the future, even if it were to become legal and more readily available.

PERSONS WHO HAVE TRIED MARIHUANA

The most current available estimate of the number of Americans who have ever used marihuana has been obtained from the results of the Commission's National Survey conducted during August of 1971. The findings show that 14% of the youth (12 to 17 years of age) and 15% of the adults (18 years and over) in the national sample reported they had tried marihuana at least once (Abelson, et al., 1972:85). Projecting from this nationally representative sample to the total U.S. resident population in 1970, we now estimate that 3,360,000 youth and 20,700,000 adults or a total of roughly 24 million Americans have tried (ever used) marihuana.

This figure is considerably higher than those obtained from other national surveys conducted between October, 1969 and February, 1971, all of which were limited to *adults* either 18 or 21 years of age and older, and none of which yielded an estimate of "ever use" higher than 6%.

The October 1969 Gallup national poll of adults 21 years and over, for example, yielded a figure of 4% or 10 million Americans who had tried marihuana (American Institute of Public Opinion, 1969). A telephone poll conducted by the Columbia Broadcasting System in August, 1970, revealed that 6% of a nationally representative sample of 1,128 adults 18 years and over had tried marihuana (CBS, 1970). The Social Research Group at George Washington University conducted personal interviews with a nationally representative sample of 2,552 adults 18 to 74 years of age. The results of the survey undertaken dur-

ing late 1970 and early 1971 show that 5% of American adults had tried marihuana (Parry, Cisin and Balter, 1972).

These figures indicate that the proportion of adults in the population who have used marihuana has increased by 300% or more between 1969 and 1971.

The Commission staff has reviewed approximately 50 surveys of college and university populations (including both undergraduate and graduate students) conducted between 1965 and 1971. Despite significant variations in the nature and scope of the surveys, the type and location of the institutions included and the survey methods and sampling procedures utilized, the findings, in the aggregate, reveal a significant increase during this period in the proportion of college students reported to have tried marihuana at least once.

Fourteen surveys conducted between 1965 and 1967 were reviewed by the Commission staff. In none of the 14 was the reported incidence of "ever use" of marihuana less than 4% or greater than 23%. The mean percentage of "ever use" was 14%.

A review of 26 surveys conducted during 1968 and 1969 revealed a lower limit of 11% and an upper limit of 67%. The mean percentage of students who had "ever used" marihuana was 27%—a figure almost twice that of the preceding period.

Of the 11 surveys conducted between 1970 and 1971, none provided an estimate of "ever use" lower than 28% or higher than 56%. The mean was 45%—more than three times as great as that for the first group (14%) and about 67% higher than that of the second group.¹

The Commission's National Survey estimated that 44% of American college students had ever used marihuana—a figure remarkably close to that obtained by averaging the "ever use" estimates of the 1970–1971 surveys and a figure also close to the 42% estimate of McGlothlin (1971a).

The most current estimate of "ever use" of marihuana by college students is that recently revealed by the American Institute of Public Opinion (1972). Its interview survey, conducted in December of 1971 among 1,063 students on 57 campuses, revealed that 51% had tried marihuana at least once. This figure suggests that while marihuana

¹ All of the college surveys reviewed by the Commission are presented in Table 1. The table presents the bibliographic reference, the year the survey was conducted, the number or names of the colleges and universities included, the region of the country represented, the survey method utilized, the sample size, a description of the population and the percentage of the students who "ever used" marihuana. Those surveys which are included in the Table but for which the percent ever used was unavailable were not included in the above tabulations.

TABLE 1

Marlhuasa Experience Among
College Students

	<u>SOURCE</u>	<u>SURVEY YEAR</u>	<u>SCHOOL</u>	<u>POPULATION</u>	<u>REGION</u>	<u>SAMPLE SIZE</u>	<u>% EVER USED</u>	<u>METHOD</u>
1.	Parlman, 1968	1965	Brooklyn College (SUNY)	graduating seniors	East	1245	4	mail questionnaire
2.	McGlothin and Cohen, 1965	1965	Large S. Cal. University	male volunteer graduate students	West	121	12	interview
3.	DeFleur and Garrett, 1970	1966	Private College	freshman/class poll	Northeast	--	12	classroom poll
4.	DeFleur and Garrett, 1970	1966	Private College	freshman/class poll	Northeast	--	23	classroom poll
5.	DeFleur and Garrett, 1970	1966	University of Massachusetts	--	Northeast	26	10	interview
6.	Imperi, et. al., 1968	1966-1967	Yale, Wesleyan	random-undergraduates	Northeast	578	20	mail questionnaire
7.	Blum, et. al., 1969	1966-1967	Five West Coast Universities	probability	West	1256	19	interview
8.	Ealla, 1968	1967	Calif. Inst. of Technology	probability	West	1290	20	mail questionnaire
9.	Suchman, 1968	1967	U. California, Santa Barbara	probability-grads. and undergrads.	West	497	21	self-admin. quest. and interview
10.	American Institute of Public Opinion (Gallup), 1967	1967	National	--	National	520	5	interview
11.	McKenzie, 1970	1967	University of Maryland	classroom samples	South	550	15	self-administered questionnaire
12.	King, 1969	1967	Dartmouth	graduating male seniors	Northeast	576	20	mail questionnaire
13.	New York Post, 1967	1967	U. California, Los Angeles	undergrads., grads.-selected sample	West	9261	--	self-administered questionnaire
14.	Marrs, et. al., 1968	1967	SUNY (Buffalo)	undergrads., grads.	East	8545	13	self-administered questionnaire
15.	Bullet (Student Newspaper)	1967	Mary Washington Coll. (U. Va.)	2/3 student body (female)	South	--	--	newspaper poll
16.	Hickley, 1968	1967	University of Minnesota	random-entering freshmen	Mid-West	4183	8	self-administered questionnaire
17.	Dumas and Shalinski, 1969	1967-1968	Cal. State, Long Beach	random-grads. and undergrads.	West	540	11	self-administered questionnaire
18.	Parlman, et. al., 1971	1967-1968	Fordham, SUNY, L.I.U., N.Y.U.	students from several N.Y. campuses	East	--	--	mail questionnaire
19.	DeFleur and Garrett, 1970	1968	Washington State University	probability	West	26111	13	interview
20.	Barter, et. al., 1971	1968	Denver-Boulder College	random-undergrads in nine schools	West	700	26	mail questionnaire
21.	Lum (no date)	1968	University of Wisconsin	random	Mid-West	662	12	mail questionnaire
22.	McKenzie, 1970	1968	University of Maryland	classroom samples	South	662	24	self-administered questionnaire
23.	DeFleur and Garrett, 1970	1968	Western Michigan University	1% grad. and undergrad. student body	Mid-West	163	16	interview
24.	DeFleur and Garrett, 1970	1968	Big Ten Universities	senior volunteers	Mid-West	--	22	self-administered questionnaire
25.	DeFleur and Garrett, 1970	1968	Big Ten Universities	--	West	--	24	mail questionnaire
26.	DeFleur and Garrett, 1970	1968	University of Washington	--	West	--	29	mail questionnaire
27.	Hagen, 1970	1968	Wesleyan	random	Northeast	70	59	self-administered questionnaire
28.	Rand, et. al., 1968	1968	Ithaca College	random-1969 graduating male seniors	Northeast	2145	23	self-administered questionnaire
29.	Ewing, et. al., 1969	1968	Large State University	registered students, classroom samples	East	138	--	interview
30.	Zofness, 1969	1968	Harvard	random	South	172	60	mail questionnaire
31.	Hochman and Brill, 1971	1969	U. California, Los Angeles	random-seniors	Northeast	1400	52	mail questionnaire
32.	American Institute of Public Opinion (Gallup), Spring, 1969a	1969	--	random-undergrads.	West	--	22	interview
33.	American Institute of Public Opinion (Gallup), Fall, 1969b	1969	National	--	National	--	32	interview
34.	McKenzie, 1969	1969	National	classroom sample	National	--	36	self-administered questionnaire
35.	Morrison, 1969	1969	University of Maryland	registered students	South	595	23	mail questionnaire
36.	DeFleur and Garrett, 1970	1969	Sacramento State College	probability	West	10364	22	interview
37.	Francis and Patch, 1970	1969	Miami University (Ohio)	random	Mid-West	580	44	mail questionnaire
38.	Gergen, Gergen and Morse, 1971	1969	University of Michigan	random (1% national population)	National	5050	33	mail questionnaire
39.	McGinnis, et. al., 1970	1969	National	60% of student body	Mid-West	239	26	self-administered questionnaire
40.	American Institute of Public Opinion (Gallup), 1969c	1969	National	students on 57 campuses	National	1092	32	interview
41.	Goldstein, et. al., 1970	1969	Carnegie-Mellon University	100% of student body	East	3010	24	mail questionnaire
42.	Worlds Department of Legal Affairs, 1970	1969	Florida College	random-juniors and seniors	South	1447	25	mail questionnaire
43.	Waller, et. al., 1972	1969	--	--	West	484	13	---
44.	Nikolai and Vakil, 1971	1969-1970	Harvard	seniors at registration	Northeast	517	67	self-administered questionnaire
45.	Graves, Rossi and Orefstein, 1970	1969-1970	U. California, Los Angeles	5% random-grads. and undergrads.	West	926	47	mail questionnaire
46.	American Institute of Public Opinion (Gallup), 1971	1969-1971	National	students on 50 campuses	National	10000	31	mail questionnaire
47.	Chambers, 1971	1970	National	college students	National	--	42	interview
48.	Playboy (no date)	1970	New York College	N.Y. college students	East	7100	48	mail questionnaire
49.	Becher Associates, 1970	1970	National	students on 200 campuses	Northeast	390	47	interview
50.	Newman, 1970	1970	Five Mass. Colleges and Universities	full-time undergraduates	Northeast	--	48	interview
51.	Johnson, 1971	1970	University of Nebraska	random classroom samples	Mid-West	3500	55	self-administered questionnaire
52.	Perry, et. al., 1972	1970-1971	Twenty New York Area Colleges	random college students (ages 18-29)	East	2552	28	mail questionnaire
53.	Abelson, et. al., 1972	1971	National	probability	National	2405	44	self-admin. quest. and interview
54.	Manheimer, et. al. (no date)	1971	U. California, Berkeley	freshmen, senior males	National	2000	--	self-admin. quest. and interview
55.	Cooper-Smith and Dich, 1969	--	U. California, Davis	undergraduates	West	303	--	self-administered questionnaire
56.	Shipley, 1971	1970-1971	Penn State-Ogonts	freshmen-seniors	East	748	56	self-administered questionnaire
57.	Asker, et. al., 1971	--	State University	random-grads. and undergrads	East	7032	--	self-admin. and mail questionnaires
58.	Wolk (no date)	--	U. Bridgeport	--	Northeast	2300	--	---
59.	American Institute of Public Opinion (Gallup), 1972	--	National	students on 57 campuses	Northeast	1063	51	interview
60.		1971	National		National			

use among college students continues to increase, the rate of increase may be slowing somewhat from that of previous years.

The Commission has likewise reviewed over thirty surveys of junior and senior high school students. Despite significant variations in design, method and terminology, however, certain trends and regularities are apparent.

Several surveys of students in one or more of the junior high school grades yielded a mean "ever use" figure of 12% for the period 1967 to 1969 (based on eight surveys) and for the period 1970 to 1971 (based on three surveys). Although the number of surveys is too small to permit valid generalization, the rate of increase in the population of youngsters approximately 12 to 14 years of age appears to have remained relatively stable between 1967 and 1971.

Twenty-four surveys of senior high school students have indicated only a 1% rise between 1967 and 1971. Fourteen surveys conducted between 1967 and 1969 yielded a mean "ever use" figure of 21%. A mean of 22% was obtained by averaging the "ever use" estimates from ten surveys conducted between 1967 and 1971.²

Again, the current 22% overall incidence rate obtained in this relatively crude manner is similar to other recent estimates made on the basis of more systematic efforts (Chambers, 1971; McGlothlin, 1971a; Josephson, et al., 1971).

The Commission's National Survey results constitute the most current estimate of marihuana experience among the nation's junior and senior high school age youth. Ninety-seven percent of the respondents 12 to 17 years of age were enrolled in and attending school at the time of the survey and the overwhelming majority had reached the expected grade level for their age. As such, one must assume that the responses of these youth relative to their experience with marihuana accurately represent the marihuana experience of the nation's youth as a whole.

The survey findings show that 8% of those youth with an eighth grade education or less and 21% of those in the ninth through twelfth grades had tried marihuana. These figures, like those given for age, increase with increasing educational level (8th grade or less=8%; 9th-10th grades=17%; 11th-12th grades=30%).

²The 35 junior and senior high school student surveys included in this analysis are presented in Table 2. The table presents the bibliographic reference, the year the survey was conducted, the number or names of the schools included, the region of the country in which they are located, the sample size, a description of the population and the percentage of students estimated to have tried marihuana at least once.

Similarly, among those with marihuana experience, 27.1% had a sixth to eighth grade education and 72.5% were in the ninth to twelfth grade educational level. Figure 1 shows the age and last grade completed of youth who had tried marihuana.

As indicated earlier, because the early surveys are not strictly comparable, precise point estimation is problematic. Nonetheless, the fact that the figures obtained in a relatively crude manner are remarkably similar to those gathered in more systematic fashion suggests that they may not be too far removed from reality. Using all of these figures as indicators, then, we may tentatively conclude that the proportion of individuals who have tried marihuana has increased since 1965 and that by far the greatest increase has occurred among college students.

The surveys clearly demonstrate that the incidence of marihuana use is age related. Persons who have used marihuana are concentrated primarily among young adults of college age (approximately 18 to 24).

Junior high school students appear to be about half as likely as senior high school students to have tried marihuana and senior high school students seem to be about half as likely as college students to have ever used the drug. The proportion of adults beyond age 25 who have used marihuana seems to mirror, on the downswing, the upward slope of "ever use" by those in the 12 to 17 age category.

A more thorough examination of the survey findings, however, suggests that age is not the only factor which is significantly correlated with marihuana use. Differential rates of use have also been observed according to sex, socioeconomic status, religious affiliation, political orientation, student status, type of school attended, community type and region of the country in which one resides. The most significant determinant of marihuana use, however, appears to be knowledge of or association with friends and age peers who have used the drug. These and other social and demographic correlates of use will be discussed in detail later in this chapter.

PERSONS WHO CURRENTLY USE MARIHUANA

Unlike the broader term "ever used" which presumably means the same (lifetime use, have tried at least once) to all who use it and which has been used as the measure of incidence throughout most of the surveys reviewed, the reference to current or present use has differed considerably. Some researchers have simply differentiated non-users

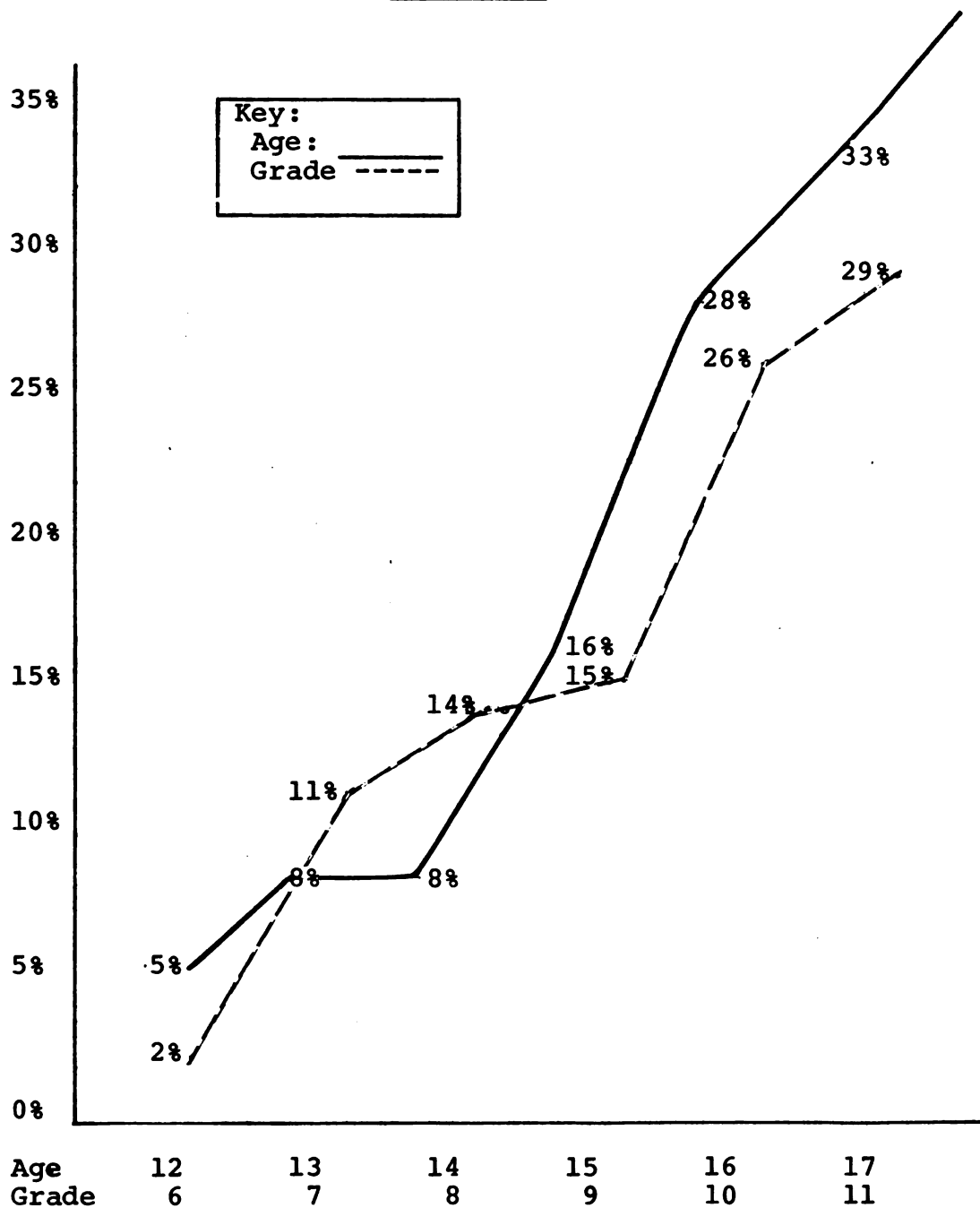
TABLE 2
Survey Findings Showing The Percentage of Junior and Senior High School
Students Who Have Used Marijuana

Author/Researcher	Survey Year	Region	School/Location	Sample Size	Population	% Ever Used
Junior High Schools						
Haake, 1967	1967	Northeast	Mammoth, New York	1297	Grades 7 - 9	6%
Calif. Dept. of Health and Welfare, 1971	1968	West	San Mateo, Calif.	18774	9th graders	25%
Calif. State Dept. of Education, 1970	1968-69	West	Four Calif. Metropolitan Counties		Grades 7 - 9	15%
Governor's Citizen Advisory Committee, 1969	1969	West	Five Utah Junior High Schools	1185	Grades 8 - 9	10%
Elsegood and Goodman, 1970	1969	South	Montgomery County, Maryland	1429	Grades 7 - 9	7%
Halen, 1971	1969	South	Prince George's County, Maryland	1658	8th graders	2%
San Mateo Co. Dept. of Health and Welfare, 1971	1969	West	San Mateo County, Calif.	2234	Grades 7 - 8	11%*
Calif. Dept. of Health and Welfare, 1971	1970	West	San Mateo County, Calif.		Grades 7 - 8	14%*
Cobb Co., Marietta Co., Ga. Board of Education, 1971	1970	South	Cobb Co., Marietta Co., Ga. Public Junior High Schools	8749	Grades 7 - 8	4%
Grosse Pointe, Mich., Dept. of Public Instruction, 1971	1971	Mid-West	Grosse Pointe, Mich., Middle School	210	Grades 7 - 8	17%
Senior High Schools						
Blum, et. al., 1969	1967	West	San Francisco, Calif.	1614	Upper-middle class, suburban	14%
Haake, 1967	1967	Northeast	Mammoth, New York	1225	Grades 10 - 12	17%
Blum, et. al., 1969	1967	West	San Francisco, Calif.	1832	Working class, city	30%
Blum, et. al., 1969	1967	West	San Francisco, Calif.	839	Middle class, suburban	13%
Smith, 1967	1967	West	Castro Valley Unified School District, 3 schools	1272	Grades 11 - 12	29%
Calif. Dept. of Health and Welfare, 1971	1967	West	San Mateo County, Calif.	1693	Grades 9 - 12	18%*
Calif. Dept. of Health and Welfare, 1971	1968	West	San Mateo County, Calif.	18774	Grades 9 - 12	32%*
Bogg, et. al., 1968	1968	Mid-West	11 Michigan high schools	1379	Grade 12	10%
Calif. Dept. of Education, 1970	1968-69	West	4 Calif. metropolitan counties		Grades 10 - 12	34%
Governor's Citizen Advisory Committee, 1969	1969	West	Utah public and parochial, 36 districts	47182	Grades 10 - 12	12%
Clarke and Levine, 1971	1969	South	Florida high schools	907	Grade 12	13%
Udell and Smith, 1969	1969	Mid-West	5 schools, Madison, Wisconsin	781	Grades 10 - 12	23%
Calif. Dept. of Health and Welfare, 1971	1969	West	San Mateo County, Calif.	23649	Grades 10 - 12	40%*
Elsegood and Goodman, 1970	1969	South	Montgomery County, Maryland	1348	Grades 10 - 12	11%
Cobb Co., Marietta Co., Ga. Board of Education, 1971	1970	South	22 Cobb and Marietta Co., Ga. public schools	7460	Grades 9 - 12	11%
Calif. Dept. of Health and Welfare, 1971	1970	West	San Mateo, Calif.		Grades 9 - 12	43%*
Preston, 1970	1970	Southwest	Houston, Texas		Grades 10 - 12	24%
Ferguson and Howard, 1971	1970	South	Virginia high schools	12453	Grades 10 - 12	12%
Baker, et. al., 1970	1970	South	Massachusetts high schools	400	Grades 10 - 12	21%
Chambers, 1971	1970	Northeast	New York State	7500	Grades 10 - 12	23%
Crowther and Baumer, 1971	1970	Mid-West	Greater Egypt Region, Illinois	2464	Grades 10 - 12	13%
Rubenstein, et. al., 1971	1970	Northeast	Small New England town	66	Grade 11	21%
Grosse Pointe, Mich., Dept. of Public Instruction, 1971	1971	Mid-West	2 Grosse Pointe, Mich. high schools		Grades 10 - 12	34%
Josephson, et. al., 1971	1971	East	2 East Coast high schools	498	Grades 9 - 12	15%

*Use within 12 months preceding survey.

FIGURE 1

Age and Last Grade Completed by Youth Who Have Ever Used Marihuana



(which does not always mean has never used) from users, but one is not sure whether all of the users are *currently* using (Josephson, et al., 1971). Others define current use or use as within the year (12 months) preceding the survey (Ferguson and Howard, 1971). One survey included a series of responses to the item "When did you use?" which included yesterday, a few weeks ago, a few months ago or more than a year ago (Governor's Citizen Advisory Committee, 1970). The American Institute of Public Opinion defines current use as within the past 30 days (1971, 1972). In the Commission's National Survey, current use refers to those "presently using" (Abelson, et al., 1972). Parry and his colleagues (1972) define current use as "within less than two months preceding the time of the interview."

In general, the outer limit of current use is within the year prior to the survey and it is this one-year limit that is observed in this discussion of current use.

The findings of the surveys with respect to current use indicate that some fraction of those who have tried marihuana at least once continue to use the drug or, the obverse, that some proportion of the ever users have discontinued use. Among youth 12 to 17, which includes those who are junior or senior high school students, current users constitute 71% to 96% of those who have ever used. One would expect, however, that since initial use of the drug often occurs during this period, many of the current users are still experimenting with the drug. Because the experience is still new to many, one might expect to find few who terminate use at this stage.

Among the college students, current users represent between one-half to three-fourths of the ever users, therefore suggesting that marihuana use is concentrated within this young adult age group.

Among adults 18 or over in the general population, current users constitute one-third to about 40% of the ever users, again suggesting that use of marihuana drops off significantly after age 24 or 25.

Table 3 presents some of the survey findings pertinent to the relationship between current use and ever use.

The findings of three recent national surveys bear out the fact that both ever use and current use are significantly correlated with age (American Institute of Public Opinion, 1971; Parry, et al., 1972; Abelson, et al., 1972). The data show that use rises within the 12 to 17 year age span, peaks at about 21, drops off slowly until age 24 or 25 and falls off sharply after that.

Table 4 presents the relationship of current use to ever use revealed in the December 1970 Gallup Poll of American college students (American Institute of Public Opinion, 1971).

Table 5 below presents the same relationship found in a 1970-1971 national survey of American adults (Parry, et al., 1972). The findings presented are for the 18 to 29 year age group only.

When these data are broken down by student status (student versus non-student), however, the findings are mitigated somewhat. In all age categories, students show a higher proportion of current users than non-students. Further, among the students, current users as a percentage of ever users continues to climb from ages 18 to 29 (from 44% to 64%). For non-students, however, the sharp decline in current usage begins in the 21-24 year age category: current users constitute 53% of the ever users in the 18-20 year age group, 29% in the 21-24 age category, and 11% among those 25 to 29 years of age. These figures therefore suggest that marihuana use may be expected to diminish significantly once the individual leaves the college or graduate school environment (Parry, et al., 1972: 2, 6).

The Commission's National Survey likewise found that current use is significantly correlated with age. Table 6 presents the findings pertaining to marihuana experience by age (Abelson, et al., 1972: unpublished data).

Among the college students in the sample (approximately 18 to 25 years of age), 52% of the ever users are current users (23%/44%). For this same age group in the general population, the figure is 44% (17%/39%). Again, this would suggest that students are significantly more likely than non-students to use marihuana and that use is discontinued after leaving the college environment.

The age distribution of contemporary "regular" users 14 years and older in the New York State general population is shown in Table 7. Again, the data demonstrate that use is concentrated among college age youth between 18 and 24 years of age (Chambers, 1971: 100).

PERSONS WHO DISCONTINUE USE OF MARIHUANA

We have already demonstrated that not all who have used marihuana continue to do so, and that the attrition rate seems to vary according to age and student status. Once again, however, variations in terminology preclude any exact estimate of just how many persons terminate use or when it is that use is discontinued. In the aggregate,

TABLE 3

The Relationship Between Current
And Ever Use of Marijuana

<u>Population</u>	<u>Survey Year</u>	<u>Source</u>	<u>Location/School</u>	<u>Ever Used</u>	<u>Current Users</u>	<u>Current Users as % of Ever Users</u>
I.						
<u>General</u>						
Youth and Adults 14 +	1970	Chambers, 1969	New York State	10.5%	7.5%	71.0%
Adults, 18 +	1969	Manheimer, et. al., 1971	Contra Costa, Calif.	12.0%	5.0%	42.0%
Adults 18 - 74	1970 - 71	Parry, et. al., 1972	National	5.0%	2.0%	40.0%
Adults 18 +	1971	Abelson, et. al., 1972	National	15.0%	5.0%	33.0%
Youth 12 - 17	1971	Abelson, et. al., 1972	National	14.0%	6.0%	43.0%
II.						
<u>College Students</u>						
	1967	McKenzie, 1970	Univ. Maryland	15.0%	11.0%	73.0%
	1968	Barter, et. al., 1971	Denver-Boulder	26.0%	16.0%	62.0%
	1968	McKenzie, 1970	Univ. Maryland	24.0%	15.0%	62.0%
	1968	Rand, et. al., 1968	Ithaca College	23.0%	17.0%	74.0%
	1969	McKenzie, 1970	Univ. Maryland	36.0%	25.0%	70.0%
	1970	American Institute of Public Opinion, 1971	National	42.0%	28.0%	67.0%
	1970	Hochman and Brill, 1971	U. C. L. A.	52.0%	41.0%	80.0%
	1970 - 71	Shipley, 1971	Penn State-Ogontz	56.0%	27.0%	48.0%
	1970 - 71	Parry, et. al., 1972	National	28.0%	14.0%	50.0%
	1971	American Institute of Public Opinion, 1972	National	51.0%	30.0%	60.0%
	1971	Abelson, et. al., 1972	National	44.0%	23.0%	52.0%
III.						
<u>High School Students</u>						
	1967	Blum, et. al., 1969	San Francisco	55.0%	39.0%	71.0%
	1969	Governor's Citizen Advisory Committee, 1969	Utah	12.0%	11.0%	92.0%
	1970	Ferguson and Howard, 1971	Virginia	12.3%	11.8%	96.0%

however, it appears that at least 40% (a conservative estimate) experiment with the drug a few times and then terminate its use.

This estimate is derived from two items of information. Some of these surveys inquired specifically as to whether respondents no longer use the drug. Others do not ask the question specifically but define "experimenters" in such a way as to suggest termination of use after one or two trials.

The Commission's National Survey (Abelson, et al., 1972) specifically inquired about termination of use. Six percent of both youth and adults reported that they no longer used marihuana—an

attrition rate among the ever users of 45% and 41%, respectively. Among those in the 18-25 year age group, 40% of the ever users said they no longer use the drug.

A 1970 New York State survey of the general population 14 years and over revealed that 29% of those who had used marihuana had not used the drug within the past six months (Chambers, 1971).

The finding of a survey of 239 students at a small college in the Midwest similarly showed that 42% of those who had tried marihuana used the drug only once or twice (McCain, et al., 1970).

TABLE 4

Relationship of Current Use to
Ever Use Among American College
Students, By Age

<u>Age</u>	<u>Ever Use</u>	<u>Current Use</u>	<u>Current Use as % of Ever Use</u>
18 and under	35%	22%	63%
19	49	32	65
20	53	35	66
21 - 23	40	25	62
24 and over	43	19	44

TABLE 5

Marihuana Use, By Age,
Among Americans 18 to 29

<u>Age</u>	<u>Ever Use</u>	<u>Current Use</u>	<u>% of Ever Use</u>
18 to 20 (N= 144)	19%	9%	47%
21 - 24 (N=207)	20%	7%	35%
25 - 29 (N=230)	10%	2%	20%

TABLE 6

Marihuana Experience Among Americans
12 Years and Over, By Age

<u>Age</u>	<u>Ever Use</u>	<u>Current Use</u>	<u>% of Ever Use</u>
12 - 17	14%	6%	43%
18 - 21	40	18	45
22 - 25	38	16	42
26 - 30	24	8	33
31 - 34	11	2	18
35 - 39	13	1	8
40 - 49	7	0	0
50 - 59	6	0	0
60 +	4	0	0

TABLE 7

Age Distribution of Contemporary
Regular Marihuana Users in
New York State, By Age

<u>Age</u>	<u>Percent</u>
14 - 17	19.3%
18 - 24	51.3%
25 - 34	17.5%
35 - 49	5.3%
50 +	6.6%

The findings of a 1968 survey of 163 students at a Western land grant university revealed that 62% of the ever users stopped using marihuana, the majority of these (77%) after experimenting with the drug only once. Those who discontinued after "using it often" constituted 14% of those who had ever used marihuana and 23% of all former users (DeFleur and Garrett, 1970).

A 1970 survey of 748 students on the Penn State-Ogontz Campus showed that 35% of the users limited use to once or twice (Shipley, 1971).

Among 2,400 Illinois high school students, 46% of those who had ever used marihuana used it only one or two times (Crowther and Baumer, 1971).

Among 47,182 junior and senior high school students in Utah, 12% reported having tried marihuana. Those who reported using the drug only once constituted 3.5% of the total sample or 29% of the users (Governor's Citizen Advisory Committee, 1969). Similarly, between 29 and 43% of junior high school ever users in Montgomery County, Maryland reported that they no longer used marihuana at the time the survey was conducted (Elseroad and Goodman, 1970).

Table 8 presents these data in tabular form. Taken together the data suggest that between 30 and 45% of all those who have used marihuana discontinue its use after experimenting with it once or twice. Undoubtedly, however, an additional proportion terminate use at a later stage.

Regardless of the point at which they begin using marihuana, however, most of the ever users terminate the practice of smoking marihuana by the time they reach mature adulthood.

Undoubtedly, this fact raises questions about the motivations for using the drug in the first place, about the reasons why some people continue to use the drug and others terminate its use, and about the reasons the majority of Americans never try it. The survey findings provide rather reasonable and predictable answers to these questions, all of which will be discussed later in this chapter.

TABLE 8
The Percentage of Ever Users Who
Discontinue Use of Marihuana

<u>Population</u>	<u>Survey Year</u>	<u>Source</u>	<u>Location</u>	<u>Ever Used</u>	<u>No Longer Used^a</u>	<u>% Ever Used</u>
I. <u>General</u>						
General Population 14 +	1970	Chambers, 1971	New York State	10.5%	3.0%	29.0%
Adults 18 +	1971	Abelson, et. al., 1972	National	15.0%	6.0%	41.0%
Youth 12 - 17	1971	Abelson, et. al., 1972	National	14.0%	6.0%	45.0%
Adults 18 - 25	1971	Abelson, et. al., 1972	National	39.0%	15.0%	40.0%
II. <u>College Students</u>						
	1968	Barter, et. al., 1971	Denver-Boulder	26.0%	10.0%	39.4%
	1968	DeFleur and Carrett, 1970	West	12.8%	7.9%	62.0%
	1969	McCain, et. al., 1970	Mid-West	26.0%	11.0%	42.0%
	1970	Shipley, 1971	Penn State	55.7%	19.9%	35.0%
III. <u>Junior and Senior High School Students</u>						
	1969	Elseroad and Goodman, 1970	Montgomery Co., Md.	7.0%	2-3%	29-43%
	1969	Governor's Citizen Advisory Committee, 1969	Utah	12.0%	3.5%	29.0%
	1970	Crowther and Baumer, 1971	Illinois	13.0%	6.0%	46.0%

^a Includes those reporting use only once or twice.

The Future of Marihuana

To this point, discussion has been devoted to the incidence and prevalence of marihuana in American society from the mid-sixties to the present. We have demonstrated that while an increasing number of individuals who have tried marihuana during this period, most of these are late adolescents and young adults, many of whom discontinue use after experimenting with the drug and most of whom terminate the practice by the time they reach mature adulthood. This, then, is the present status of marihuana use.

But what about the future? Is our society likely to witness further increases in the proportions of individuals who use the drug? Or can we expect the passing of a fad or fashion? Are those who have never used the drug likely to try it in the future? And if so, under what circumstances would this be likely to happen? These are the answers we now seek from the numerous surveys available to the Commission.

How Much Marihuana Use Can We Expect in the Future?

The surveys reviewed by the Commission staff repeatedly show that the overwhelming majority of individuals who have never used marihuana report that they do not expect to or definitely will not use the drug in the future. These studies also show that even among the users, that is, those who have not already terminated use, a fairly substantial proportion report reasonably firm expectations of decreasing or discontinuing use in the future. If these reports are accurate, as only time can tell,

society may witness a stabilization, and possibly a decrease, in marihuana use in future generations.

The Commission's National Survey found that 65% of *all* adults and 81% of adults who have never tried marihuana "would not try it under any circumstances." Likewise, 61% of *all* youth and 73% of those who have *never* tried marihuana also said they would not try it under any circumstances (Abelson, et al., 1972). See Table 9.

These data show that among the present 12-13 age group, approximately 12% might be expected to try marihuana at some time. This figure is not significantly different from the proportion of junior high school students who have used marihuana at the present time. Approximately one-third of the high school age youth (14 to 17) might be expected to use marihuana in the future. Therefore, we may expect an increase in use among this group as they reach college age. The increase, however, is not as large as that experienced among college age youth in the past several years.

Among young adults now of college age, who have never tried marihuana, about one-fourth may be expected to do so at some time in the future, approximately the same figure shown for the 26-30 group who have already tried marihuana. Lastly, among the non-users who are now 26 years and over, about 18% may try marihuana in the future—a figure twice as large as the present ever-users in that age category (9%).

In summary, these figures indicate that the greatest increases in use among those who have not yet tried marihuana will probably be among young adults of college age and those over 25 years of age. With respect to the former, however, this increase may be of a considerably smaller magni-

TABLE 9

Percentage of American Youth and Adults Who Reported They Have Not and Would Not Try Marihuana Under Any Circumstances, By Age

<u>Age</u>	<u>Percent</u>
12 - 13	81.8%
14 - 15	68.2%
16 - 17	66.6%
18 - 25	75.0%
26 - 34	81.0%
35 - 49	81.7%
50 +	83.6%

tude than that witnessed within this age group in recent years. The data give no indication that the proportion of early adolescents who might try marihuana can be expected to increase in any significant manner in the future.

A 1970 CBS telephone poll of 1,128 adults 18 years and over revealed that 84% of those who had not used marihuana did not want to try it. Seven percent of the non-users said they would like to see what it was like. Table 10 below shows the age breakdown of those 7% who have not but would like to try marihuana (Columbia Broadcasting System, 1970).

Of those who did not want to try it, 68% said their friends neither had tried marihuana nor currently used it. Among those non-users who wanted to try it, 67% had friends who either tried

marihuana (26%) or who were currently using it (41%).

In a 1970-71 national household survey of 498 youth between the ages of 12 and 17, 15% were reported to have tried marihuana. Of the non-users, the majority had little interest in trying the drug. Table 11 below shows the age breakdown of those non-users both interested and not interested in trying marihuana (Josephson, et al., 1971).

In a 1967 survey of students at the California Institute of Technology (Eells, 1968), only 6% of the non-users said they planned to use the drug in the future. Among the users, however, the likelihood of use in the future increased with the current frequency of use: 22% of the casual users, 77% of the steady users and 93% of the heavy users reported plans to use the drug in the future.

TABLE 10

Percent of Respondents Who Report They Have
Not Used Marihuana But Would Like To Try It
By Age

<u>Age</u>	<u>Percent</u>
Total Sample	7%
18 - 24	12%
25 - 29	13%
30 - 34	8%
35 - 39	4%
40 - 49	5%
50 +	4%

TABLE 11

Percentage of Youth, By Age, Who Use Marihuana
and Who Have Not Used and Either Are or Are Not
Interested in Trying It

<u>Age</u>	<u>Users</u>	<u>Non-Users</u>	
		<u>Not Interested In Trying</u>	<u>Interested In Trying</u>
12 - 13	3%	87%	10%
14 - 15	15%	74%	11%
16 - 17	28%	64%	8%

A survey of a midwest college campus in the Spring of 1969 revealed the following plans for future use among those who had *used* marihuana: use during the next 12 months—42%, no more use—43%, ambivalent, might try once or twice—15% (McCain, et al., 1970: 5-6).

University of Maryland students were surveyed for three consecutive years, 1967-1969. Over these years, significant increases were revealed in both the proportion of students who had ever used marihuana and those who expected to continue its use. Table 12 shows the survey results for ever use and continued use for each of the three years (McKenzie, 1970).

In 1969, 3,010 Carnegie-Mellon University students were asked about their intended future use of a number of drugs. The responses regarding future use of marihuana are presented in Table 13 (Goldstein, et al., 1970: 61).

Student non-users and users in Cobb County, Georgia high schools were asked whether they might use marihuana in the future. Their responses are shown in Table 14 below (Cobb County, Georgia, Board of Education, 1971).

As can be seen in Table 15, 1,658 Prince George's County, Maryland 8th Graders surveyed in 1969 (Hafen, 1971) gave exactly the same responses as their fellow students from Georgia.

In summary, these survey data suggest that only about 6% of the junior and senior high school students who had not used marihuana and about one-fourth of those who had used marihuana could be expected to do so in the future. These figures are not significantly different from those found later in the Commission's National Survey of the same age group.

Among college students, likewise, non-users can be expected to refrain from use; between one-fourth to three-fourths of the users are likely to continue (the highest percentages probably being concentrated among the most frequent or heavy users).

As for adults in the general population, the same conclusion is reached with respect to non-users; most may be expected to remain non-users. Depending on their age and the number of friends who have used or use the drug, between 5 and 20% might try it at some point.

TABLE 12

Percent of University of Maryland Students
Who Have Used and Intend to Continue Using
Marihuana, By Year

<u>Year</u>	<u>Ever Used</u>	<u>Intend To Continue</u>	<u>% Ever Used</u>
1967	15.0%	10.9%	73%
1968	23.9%	15.4%	64%
1969	35.6%	25.4%	71%

TABLE 13

Carnegie-Mellon University Students'
Intended Future Use of Marihuana

<u>Intended Use</u>	<u>Percent</u>
Definitely Not	29.8%
Probably Not	9.7%
Might Like To	11.1%
Definitely Would	15.0%
Don't Know	4.1%
No Response	30.0%

TABLE 14

Future Use of Marihuana Among
Georgia High School Students

	<u>Non-Users</u>	<u>Users</u>
Yes	2%	12%
No	94%	76%
Undecided	4%	11%

TABLE 15

Future Use of Marihuana Among
8th Graders in Prince George's
County, Maryland

	<u>Non-Users</u>	<u>Users</u>
Yes	2.01%	12.04%
No	93.90%	76.50%
Undecided	4.08%	11.44%

Circumstances Under Which Non-Users Might Try Marihuana

Many persons have expressed the concern that if marihuana use were not illegal and if the drug were more readily available, many more individuals than have now tried marihuana might initiate use of the drug. Again, however, the survey findings suggest that neither these nor other conditions or circumstances are likely to increase significantly the probability of use among those who had not tried marihuana.

The Commission's National Survey has corroborated many previous findings in this respect. Only .4% of the youth and .9% of the adults who never used marihuana would do so if they knew where to get the drug; 5.6% of the youth and 2.6% of the adults would try it if marihuana were offered at a gathering of close friends where others were using the drug; and 13% of the youth and 4% of the adults said they would try marihuana if

it were legal. The majority of both youth and adults (73% and 81%, respectively) said they would not try marihuana *under any circumstances* (Abelson, et al., 1972).

In a survey of 2,464 high school students from Greater Egypt Region, Illinois, respondents who had never tried marihuana were asked if they would do so were the drug to be offered to them. Two-thirds (66%) said no, 11% said probably not, 9% said maybe and 3% said yes (Crowther and Baumer, 1971).

Thus it appears that even if the current policy were changed so that marihuana use was either decriminalized or legalized, and even if the drug became more freely available than it is now, the majority of individuals who have not used marihuana do not believe they are likely to initiate use.

In summary, the data on future use suggests that American society may not witness a significant increase in the use of marihuana in the future.

Instead, the data suggest that we may have reached or be nearing a plateau and that in time what may be the fashion of the present generation may cease to be so in the future.

Why People Use Marihuana

Many persons who have never tried marihuana have a difficult time understanding what motivates people to initiate or continue the use of marihuana. They are often particularly perplexed at the rather widespread attraction to an activity which some view as morally wrong, which many view as potentially harmful and which most recognize as illegal. Although several surveys have addressed this question of motivation, the number and types of responses have been as varied as the ways in which the questions were asked and as diverse as the choice of responses provided.

When considered in the aggregate, however, the variability disappears for the most part. In short, persons who initiate use of marihuana generally do so out of curiosity and the desire for fun, excitement or "kicks." Favorable reports by their marihuana using friends or peers generally lead the potential user to anticipate a pleasurable or favorable experience. Young people, especially, have a need for social identity and approval by their peers, and marihuana use provides one potentially enjoyable means of satisfying these needs.

As many observers have noted, expectations regarding the marihuana experience influence, in large measure, the kind of experience one will have. To the extent that it is favorable and meets the expectations, the experience is likely to be repeated, at least until the novelty wears off or some other situations or circumstances begin to extinguish the favorable response.

Those who continue to use the drug, therefore, do so for the most part because they have enjoyed the experience. Those who discontinue use generally do so because they lose interest, or because they come to associate some unpleasant consequences with the use of marihuana.

On the other hand, those who have never tried the drug are more likely to place greater weight upon the illegality of use, the reports of potentially damaging effects to mind and body and fear of addiction or arrest. Because most of their friends have likewise abstained from marihuana use, they receive little reinforcement from significant others and are left with their fears and trepidations. Within this framework, it is not surprising that the majority of never users remain never users; they find nothing to attract them to use of the drug. That the concern about possible harmful effects

outweighs concern about the illegality of use is cogently demonstrated in the findings of the Commission's National Survey; 81% of the adults and 73% of the youth (12 to 17) who had *never* tried marihuana reported that they would not try it under any circumstances. Only 4% of the adults and 12% of the youth who never used marihuana would "probably try it" if marihuana were *legal* and *available* (Abelson, et al., 1972: 98).

REASONS FOR INITIATING AND CONTINUING USE OF MARIHUANA

The most common reasons given in the surveys for initial or continuing use of marihuana have included: curiosity; the wish to experience something new and exciting; a desire "to get high," or to have an enjoyable or pleasurable experience; the greater understanding of one's inner self; the hope of overcoming boredom or relief of tension, anxiety or depression; and the belief that marihuana will aid one to better relate to friends or to become more sociable.

Table 16 shows, in decreasing order of frequency, the reasons given by Pennsylvania State—Ogontz college students for using marihuana (Shipley, 1971).

Carnegie-Mellon students in Pittsburgh, Pennsylvania (Goldstein, et al., 1970) were most likely to indicate that they wanted to get high or feel good or to explore the inner self. When curiosity was listed as a possible reason on the freshman follow-up survey, this response was chosen most frequently, followed by "for enjoyment or pleasure; to get high, feel good."

Between 1969 and 1971, a national survey of 10,000 college students from 50 campuses was undertaken by several researchers from Johns Hopkins University (Groves, et al., 1970). Preliminary findings based on 2,759 students, 31% of whom reported having tried marihuana, are shown in Table 17.

In two surveys of marihuana use among University of Maryland students (McKenzie, 1970) respondents were asked to indicate the reasons why they used marihuana. From the choices provided, they were told to select up to three. Table 18 below shows the reasons ultimately given by these students and the order of importance attached to each.

A 1968 survey of 26,000 college students in the Denver-Boulder area (Barter, et al., 1971) found that 58.4% of the students listed curiosity as the primary reason for using marihuana; 25.7% thought it would be worthwhile for its own sake and 5.8% said they tried it for kicks. When asked the reasons for continuing use of the drug, 68.2% of the users replied that it was pleasurable (fun).

TABLE 16

Reasons For Use Given by 748 Penn State Students
In Order of Decreasing Importance

Curiosity
 Desire for Kicks
 Boredom
 Friends Talked Me Into it
 Add Meaning to Life
 Improve Social Relationships
 Desire for Group Acceptance
 Personal Problems, Depression

TABLE 17

Responses for Using Marihuana In A
National Survey of College Students

<u>Reason</u>	<u>Percent</u>
To get pleasure, to get moderately high, feel good	52%
To use with others to enjoy the effects together	37%
To experiment once or twice	21%
To be sociable and feel comfortable with others	11%
To explore inner self or enhance creativity	11%
To produce intense, exciting experiences	9%
To relax, to reduce anxiety or tension, to help sleep	8%
To overcome depression	7%
To help work, performance, or weight	1%
Other	4%

A survey of over 39,000 junior and senior high school students in the state of Utah (Governor's Citizen Advisory Committee, 1969) mentioned, in decreasing order of importance, the following four reasons for using marihuana: curiosity, for kicks, because friends use them, on a dare. Among Madison, Wisconsin High School students who had used

marihuana, most (52%) thought that young adults who use marihuana and other drugs do so because it is fun; among the non-users, however, 37% thought young adults used it because it was the thing to do (Udell and Smith, 1969). Table 19 below shows all of the reasons they believe young adults use marihuana.

TABLE 18

Reasons Given by University of Maryland Students for Using Marihuana
By Rank Order and Percentage, 1968 and 1969

<u>Reasons Given</u>	1968		1969	
	<u>Rank Order</u>	<u>%</u>	<u>Rank Order</u>	<u>%</u>
Get high, feel good	1	62%	1	73%
Experience things more vividly	2	55%	2	52%
Explore inner self	3	26%	4	22%
Relieve general anxiety, tension nervousness, irritability	4	23%	3	27%
Make a good mood last longer or make a fine feeling better	5	22%	5	17%
Relieve boredom.	6	19%	7	15%
Be more friendly, enhance socia- bility, be more loving	7	9%	6	16%
Feel less depressed or sad	8	6%	8	10%
Go along with what others are doing	8	6%	9	6%
For religious or mystical feeling	9	5%	11	3%
Shut things out of mind	9	5%	10	5%
Enjoy doing something illegal or forbidden	10	3%	12	1%
Prepare for stress	11	0%	12	1%
Be like others I admire	11	0%	12	1%

The Commission's National Survey (Abelson, et al., 1972) is the first to solicit the reasons for using marihuana among a nationally representative sample of youth and adults. The data show that curiosity, experiencing something new and exciting and a desire for kicks, pleasure or to get high were the reasons named most frequently by the adults and the youth. Table 20 presents the reasons given by both youth and adults in decreasing order of importance.

These data, taken as a whole, indicate that most people try marihuana, at least initially, because they are curious and because they think that marihuana will satisfy their desire for excitement, "kicks" or pleasure. Particularly among young people, however, a substantial percentage of respondents also choose responses which relate to their need for social approval, enhanced sociability, a better understanding of their friends and a shared experience among significant others.

The reasons which relate to one's social experience were generally found to outweigh the use of marihuana as a means of overcoming personal problems such as anxiety, depression, tension or stress.

In sum, marihuana use is, from its very beginning, an experience which is generally perceived as an exciting and pleasurable social activity to be shared and enjoyed among one's peers.

**REASONS FOR NEVER TRYING OR FOR
DISCONTINUING THE USE OF MARI-
HUANA**

Despite the fact that marihuana use has increased substantially since the mid 1960's, most Americans have never tried the drug. Data from the National Survey (Abelson, et al., 1972) show that 80% of the youth and 71% of all adults had never used marihuana.

TABLE 19

Reasons High School Students in Madison, Wisconsin
Think Young Adults Use Marihuana

	Users		Non-Users	
	<u>Rank Order</u>	<u>Percent</u>	<u>Rank Order</u>	<u>Percent</u>
Using drugs is fun	1	51.7%	4	9.7%
It's the thing to do	2	17.2%	1	36.9%
To get away from pressure at school	3	9.1%	5	7.2%
Problems at home with parents	4	8.0%	3	13.2%
To make it easier to get to know members of the opposite sex	5	3.4%	8	1.3%
Using drugs makes one popular	6	2.2%	7	4.1%
Psychological (mental) problems induce usage	7	1.1%	2	18.2%
People unknowingly get hooked on drugs	8	0.0%	6	6.2%

When asked their reasons for not trying marihuana, more than one-half of the youth expressed fear of damage to body (58.3%) or mind (54.8%) or said they refrained because of the illegal status of use (52.8%). Slightly under one-half of the youth abstained because they felt that marihuana use was morally wrong (47.5%). Slightly more than one-third of the youth (35.6%) were concerned about becoming addicted to marihuana, and about one-fifth listed fear of arrest (21.3%), fear of jail (17.5%), pressures from family (20.8%) and uncertainty about the drug's effects (22.5%) as the reasons for not trying it.

Like the youth, about one-half (46.9%) of the adults thought that marihuana use was morally wrong. About one-third of the adults, as compared to about one-half of the youth, however, expressed

concern over the illegal status of the practice (35.9%) and possible damage to mind (36.6%) and body (38.6%). Fear of becoming addicted was expressed by almost one-fourth of the adults (23.7%) and one-fifth (20.5%) felt uncertain about the drug's effects.

Only a small proportion of either youth or adults said they refrained from using marihuana because it was hard to get (6% of the youth, 5% of the adults) or because it was too expensive (8% and 4%, respectively).

A mail survey of UCLA students also inquired into the reasons for using or not using marihuana. The primary reasons given by the non-users were lack of interest, fear of physical and mental effects and fear of legal reprisals (Nisbet and Vakil, 1971:19). See Table 21.

TABLE 20

Reasons Given for Using Marihuana By A Nationally
Representative Sample of Youth (12 to 17) and Adults
(18 and over) in the American Population, 1971

<u>Reasons for First Trial</u>	<u>Youth</u>	<u>Adults</u>
To satisfy my curiosity	55%	63%
To experience something new and exciting	47%	26%
To get kicks or to get high	27%	14%
Expand my awareness and under- standing	12%	12%
To relate better to my friends	14%	7%
To relieve anxiety or tension	12%	3%
Other people pressured me into it	18%	6%
To overcome boredom	11%	4%

TABLE 21

Reasons Given By Non-Smokers
for Not Trying Marihuana, Ranked
By Order of Importance

	<u>First Place Votes (N=489)</u>	<u>Second Place Votes (N=409)</u>	<u>Third Place Votes (N=395)</u>
Not interested	81.0%	10.1%	5.3%
Fear of physical and mental effects	13.3%	49.4%	17.7%
Fear of legal reprisals	10.6%	26.6%	50.5%
Too difficult to obtain	2.1%	5.4%	9.8%
Too expensive	0.0%	7.2%	14.0%

As already indicated, a relatively small proportion of those who have tried marihuana continue to use it. Various surveys have shown that most of those who have tried it discontinue use at some point, usually after their first or first few trials.

Of particular interest to many students of drug use, were the reasons why so many had decided to

terminate use of marihuana. The response given most often was lack or loss of interest or desire (Goldstein, et al., 1970; McKenzie, 1970; Abelson, et al., 1972). The surveys conducted among University of Maryland college students in 1968 and 1969 (McKenzie, 1970) revealed that two-thirds of the students reported no interest in experiencing

the effects of marihuana. The Commission's National Survey found that 61% of the adults who had experience with marihuana but no longer use it cited loss of interest as the reason given for terminating use. Likewise, 38% of the youth who terminated use also gave loss of interest as the reason for termination (Abelson, et al., 1972). Lack of desire for the marihuana experience was similarly given as the reason for termination by 31% of the marihuana tasters (one-time users) and 14% of the marihuana users (between two and 10 times) at Carnegie-Mellon University (Goldstein, et al., 1970).

In the Carnegie-Mellon study, illegality was cited as the reason for discontinuing use by 12% of the marihuana tasters and 10% of the marihuana users. This is in contrast to more than 30% of the youth and the adults in the Commission's National Survey who gave this as a reason for terminating use. Among the University of Maryland students, about one-third also cited illegality as the reason for abstaining or for terminating use.

Concern about the possible harmful effects of the drug on the body and the mind was also voiced by a considerable number of respondents, although it appears that fears tend to level off somewhat once the individual has experience with the drug. Even among those who use it, however, physiological or psychological damage continued to be a concern to about one-fifth of both youth and adults (Abelson, et al., 1972: 92). See Table 22.

The data from these surveys indicate rather consistently that neither the lack of availability nor the cost was the primary motivator in the decision to refrain from or discontinue marihuana use, but that loss of interest, concerns about effects and illegality played the most significant role in the decision to refrain from or to discontinue use.

The data also show that persons who never used marihuana are about twice as likely as those who terminated use to express fears of physiological and psychological damage. Among the youth, more than three times as many never users as former users were afraid of becoming addicted to marihuana.

With respect to the illegality of marihuana use, there was no significant difference between adult never users and former users in those citing illegality as the reason for abstaining from use, but those who terminated use were more than twice as likely as those who never tried marihuana to express fear of arrest (16% vs. 7%) or jail (21% vs. 9%).

Table 22 presents the reasons given by college students as well as youth and adults in the general population for never trying and for discontinuing use of marihuana.

*Becoming a Marihuana User**

Meaningful discussion of the use of marihuana necessarily involves investigation of the process which occurs prior to marihuana use. Thus, we must ask, "Is the use of legal drugs such as alcohol, cigarettes and prescription drugs related in any way to the use of marihuana and other illegal drugs?" Statements attempting to describe human behavior almost invariably extend beyond the specific subject matter of the statements themselves. When the statement, "marihuana leads to the use of more dangerous drugs" is made, a number of underlying assumptions is that socially acceptable substances do not "lead to" dangerous drug use—that the role of marihuana is distinctive and unique. For example, many officials and the public do *not* believe that alcohol and cigarettes "lead to" dangerous drug use; they often do believe, however, that marihuana does. The social and legal acceptance of alcohol and cigarettes is, in large part, responsible for the former; the criminalization and concomitant stigmatization of marihuana, its use and possession would appear to be the basis for the latter belief. Underlying both the hypothesis and conclusion is the issue of legality. Implicit, then, is the notion that only an illicit substance can lead to the use of other and more dangerous substances.

What, then, is the role of legal drugs in the escalation process to marihuana and other, potentially and more dangerous drugs?

Considerable evidence exists which points to the fact that legal drugs do lead to the use of illegal drugs, an escalation from cigarettes and alcohol to dangerous drugs, and an escalation from prescription drugs, such as barbiturates, tranquilizers and amphetamines to marihuana and such dangerous drugs as LSD, cocaine and heroin.

In at least the following three meanings, legal drugs "lead to" the use of illegal drugs: (1) legal parental drug use is statistically correlated with the illegal drug use of their children; (2) young people who drink alcohol and smoke cigarettes have a higher likelihood of eventually using illegal drugs than is true of their age peers who do not use these legal drugs; (3) there is considerable suspicion that pharmaceutical advertising contributes to a climate of tolerance toward drug taking, toward consciousness-altering chemicals and, in addition, produces prescription drugs in such massive quantities that their use outside a medical setting on a widespread basis is almost inevitable.

* A substantial portion of this section is drawn from a report submitted to the Commission by Dr. Erich Goode, titled, *Marihuana Use As Related To The Use Of Dangerous Drugs*.

TABLE 22

Reasons Given By Youth (12-17), College Students and Adults (18 and over)
For Never Using, Decreasing or Terminating Marihuana Use

Reasons Given	Univ. of Maryland*		Carnegie-Mellon		National Survey		Terminated****
	1968	1969	Tasters	Users	Youth	Adults	
	66%	66%	31%	14%	38%	61%	
Loss of interest/no desire for experience							
It's illegal	35	37	4	3	53	36	31
Don't know about effects	--	--	--	--	22	20	30
Fear of damage to body (medical, physical effects)	30	23	1	1	58	37	23
Fear of damage to mind (psychological effects)	42	36	3	4	55	37	21
Fear of being arrested	--	--	--	--	21	9	25
Fear of Jail	--	--	--	--	17	7	14
It's morally wrong	--	--	--	--	47	47	19
Pressure from family (friends)	16	13	1	1	21	3	16
Bad experience with marihuana	--	--	--	--	--	--	12
Fear of becoming an addict	--	--	--	--	21	9	7
Unavailable/hard to get	6	5	7	8	6	5	5
Observation of others	13	16	4	6	--	--	--
Costs too much	--	--	3	0	--	--	--
Not sure/no answer	--	--	6	2	8	4	--
	--	--	--	--	15	20	13
			29	52			9

*McKenzie, 1970

**Goldstein, et. al., 1970. Small percentage base suggests unreliability of the data. Top figures represent primary reason; bottom, secondary

***Abelson, et. al., 1972: unpublished data.

****Abelson, et. al., 1972: 92. For youth, small percentage base suggests unreliability of the data.

Drug use is partly an outgrowth of the life style of one's parents. This statement might appear to contradict common sense. After all, parents overwhelmingly oppose their children's drug use. Yet, how could such a negative sentiment translate into its opposite? Massive generational differences, especially in regard to drug use, obviously exist, but historical trends take place within a context of continuity.

The political ideology of today's youth is probably a few degrees to the left of that of their parents. But it is the specifically liberal parent who tends to raise (slightly more) liberal children. The parental generation will disapprove of much of the sexual permissiveness of today's young adults, but it is from the somewhat permissive parents that the (somewhat more) permissive children spring.

Young people who use illegal drugs tend to have been raised by parents who, although negative towards their use of drugs, were not nearly so hostile as their neighbors whose children did not use illegal drugs.

PARENTAL DRUG USE

Parents provide a model or example of acceptable behavior for their children. The example conveyed by a liquor drinking, cigarette smoking, prescription taking parent is very different from that of the parent who is a complete abstainer. There is, then, a generational continuity to historical change. The same acts do not mean the same thing in different generations, and likewise, different acts may mean very similar things. In a sense, the illegal drug use of many youth today has a kind of equivalency in the legal drug use of their parent's generation.

A series of studies conducted by Toronto's Addiction Research Foundation documented the correlation between parental legal drug use and the illegal drug use of their children (Smart, 1970, 1971; Smart, et al., 1971). For instance, mother's legal use of prescription tranquilizers was related to the use of all drugs among children. The elementary and high school students who said that their mothers took tranquilizers every day were almost *three times* as likely to have tried marihuana as were the students who said that their mothers never took tranquilizers (the percentages were 32% vs. 12%). The same held true for students who had tried LSD—21% vs. 6%. Even greater differences were observed between the illegal use of prescription drugs of children whose mothers did, versus those whose mothers did not use prescription drugs legally. Only 5% of the students who said that their mothers never took

tranquilizers had actually tried a tranquilizer themselves, but this was true of 35% for the children of mothers who took tranquilizers daily. Even the use of opiates (a class of drugs which includes heroin) correlated: 2% of the children of the "never" tranquilizer mothers had tried an opiate, but 15% of the children of the "daily" mothers had taken an opiate drug at least once.

Two high school students, Ted Lawrence and Jim Velleman, conducted a drug survey at their school (Lawrence and Velleman, 1970). One of their most important findings was the existence of a strong continuity in drug use patterns between the generations. Analyzing almost 1,500 questionnaires, the researchers found that the tendency of young people to use illegal drugs such as marihuana and LSD was significantly correlated with their parents' use of alcohol, cigarettes and prescription drugs. For example, 44% of those students who said that their mothers had ever been drunk said that they had smoked marihuana three or more times, but this was 27% for those who said that their mothers had never been drunk. Of the students who said that at least one parent consumes two or three drinks at one sitting, 16% had used LSD twice or more; the comparable figure for those students who said that their parents drank less than this was 7%.

After surveying six suburban New Jersey high schools a team of public health experts verified this generational continuity in drug use (Lavenhar, 1971). Parents who smoked one pack of cigarettes a day or more were *four to five times* as likely to have children who experimented with dangerous drugs such as heroin and methamphetamine than were parents who did not smoke at all. The same basic relationship held up if either parent smoked (or drank), but the correlation was stronger if the mother rather than the father used legal drugs.

This study, conducted by researchers at the College of Medicine and Dentistry of New Jersey at Newark, also inquired about the parental use of *illegal* drugs. A child who smoked marihuana, for instance, was roughly *thirty times* as likely to say that one or the other parent also smoked marihuana than was the child who did not smoke marihuana. The percentages for all groups, however, were low. Only .1% of the non-marihuana-smoking students said that their parents used marihuana, but 3% of the marihuana-smoking students said that they had parents who smoked marihuana.

At the same meeting in which the above survey was presented, another researcher who is engaged

in a similar research undertaking warned that young people who use drugs tend to overestimate the extent of drug use around them, including that of their own parents. It is likely, therefore, that they would tend to overestimate the legal as well as illegal drug use of their parents. Because the studies cited above relied on the children's estimates of their parents' drug use patterns, the estimates might be somewhat inflated. A study, now in progress, relies on parents' own estimates rather than those of their children, and therefore tends to reduce the differences reported above. Nonetheless, a strong correlation remains.

In sum, the conclusion seems inescapable that parental example is a powerful force in impelling young people toward illegal drug use. This does not mean that all smoking and drinking parents will raise children who inevitably become involved with illegal drugs; nor does it mean that only drinking and smoking parents will raise drug-using children. But it does mean that there is a statistical relationship between these two forms of behavior; whether or not there is causality in this statistical association is a matter for further investigation. The consistency and significance of the relationship probably does indicate, however, that the legal drug use of adults today is one potent factor in contributing to the illegal drug use of their children.

Too often this issue becomes construed in ideological terms, often rendered in the equation: if the older generation can have their drugs of choice, then why can't members of the younger generation smoke marihuana? It is facile to dismiss this question as a *non sequitur*, but the fact remains that marihuana use, at the very least, grows out of much of the same cultural values and emphases that drinking and smoking did a generation or two ago.

Regardless of the relative harm of the various drugs in the observed relationship, and regardless of the validity of the arguments for or against the legalization of marihuana, it is difficult to avoid the fact that marihuana (which is by far the most frequently used of the completely illegal drugs in America) is *perceived* by the young as an equivalent recreational drug, in much the same way that adults perceive drinking. Mistaken or not, this belief is a fixture of the thinking and ideology of large segments of the young today, and the data appear to indicate that the parental example of the use of (legal) mind-altering drugs is implicated in a significant manner with the use of illegal psychoactive drugs among the young. This is where drug use receives its impetus—this is where

it starts. This is how it is sustained. It is naive to assume that the two forms of drug use discussed here exist in two radically different realms simply because one is legal and the other illegal. The evidence points to the fact that, behaviorally and socially, they are remarkably kindred.

PEER GROUP INFLUENCE

Aside from the influence of parents as a primary socializing influence, the social peer group is one of the most significant elements in shaping, reinforcing and modifying the behavior of young people. To a considerable extent the younger the individual is, the more nearly he can be expected to mirror the judgments, opinions and outlook of his parents. As he grows older and is exposed to new and different experiences, both formally and informally, his opinions and judgments will change. The changes in behavior and perception will be due, in part, to cognitive reasoning of the issues involved, the risks, the moral implications, etc. In no small part, however, the changes in behavior, opinion and judgment will be related to the individual judgment about the feelings of his peers.

Food and dress fads, speech patterns and vocabulary, demeanor and other aspects of behavior are all modified by the influence of peers. Whether the individual conforms his ideals or behavior to suit that of his peer group out of concern for social acceptance or because of a belief in the usefulness or appropriateness of the idea is not, in one sense, significant. What is important is the realization that as the individual grows in age and experience his opinions and judgments will shift from his young years and this shift will be markedly influenced by his social peer group.

The influence of parental values and behavior along with the influence of one's peers are perhaps the two most significant factors in affecting the quality and quantity of youthful behavior.

The Commission's National Survey found that the influence of a friend or friends was the single most significant element present in initiating marihuana use. It is worth noting that this fact applies to both the youth (12-17 year olds) in the survey as well as to the adults (18 years and older). Among the youth, 62% indicated that they received their first marihuana from a friend while 51% of the adults reported a similar experience. As we will point out elsewhere in this section, having friends who use marihuana plays a significant role in determining whether or not the individual will be likely to try marihuana and to continue its used.

Circumstances of First Marihuana Use

Before describing the marihuana user and his pattern of use, discussion of the time and circumstances of initiation to the practice seems appropriate. The questions which come to mind in this connection are the following:

- The age at which one first becomes aware of marihuana, either by hearing or reading about it or knowing someone who had tried it.
- The age at which one becomes curious about marihuana and begins to consider trying it.
- The age at which one has the first opportunity to try it.
- The age at which one first tried marihuana.
- The manner in which marihuana was obtained the first time one used it.
- The person who introduced the initiate to marihuana.
- The person or persons with whom the initiate first tries the drug.
- The place at which the first trial took place.
- The advance planning or spontaneity of initial use.

Time of First Use

Prior to the Commission's National Survey, very little of this kind of information was available, and the data which were available related primarily to the age or grade level of the initiate. The several surveys of college and high school populations which addressed the issue of time or age of first use were conducted between 1967 and 1969. The results of the college student surveys suggest that the majority of users did not begin using marihuana until they were in college.

A 1967 survey of undergraduate students at California Institute of Technology revealed that 85% of the users initiated use as college students; 15% begin prior to entry (Eells, 1968: 21, 463). A survey conducted the same year on the University of California, Santa Barbara campus showed that 22% of the users had begun use prior to entry (Suchman, 1968). The findings of an extensive survey of college undergraduate and graduate students in the Denver-Boulder area in 1968 indicated that 30% of the users were initiated to marihuana prior to entering college, 62% were introduced to marihuana as college undergraduates and 7% first used marihuana after college—either prior to entry or after entering graduate school (Barter, et al., 1971: 249).

In their 1968 study of University of Vermont students, Steffenhagen and his colleagues (1969) found that 69% began smoking marihuana in col-

lege. Among the users in a western land-grant college also surveyed in 1968, 28% of the freshman class had reported prior experience with marihuana (DeFleur and Garrett, 1970).

During 1969, a national survey of students in 38 colleges revealed that 31% of the freshmen had prior experience with marihuana (Gergen, et al., 1971). A study of 239 midwest college students revealed that 39% of the users began use prior to college entry (McCain, et al., 1970: 9-10). The results of a UCLA student survey showed the mean age of first use to be 18 years—the average age of college freshmen (Hochman and Brill, 1971).

In another 1969 study, Goldstein and his colleagues (1970) surveyed over 3,000 undergraduate and graduate students at Carnegie-Mellon University in Pittsburgh, Pennsylvania. Among the 802 freshmen, 3.2% had used marihuana only once and had used no other drug. Fifty percent of the freshmen "marihuana tasters" had tried the drug for the first and only time while in high school and 35% did so after leaving high school but before entering college. Freshmen "marihuana users" (those who used the drug 2 to 10 times) also constituted 3.2% of the freshmen class. Seventy-three percent started using marihuana in high school and 23% began using the drug after high school but prior to entering college.

Among the upper classmen and graduate students, 3.2% used marihuana only once and 4.9% used it two to 10 times. Among the "tasters," 21% did not try marihuana until their third year in college and 17% did not try it until they were in graduate school. Among the users, approximately one-fourth started use in either their first, second or third year in college. See Table 23.

Responses to a 1970 mail survey of UCLA students (Nisbet and Vakil, 1971) again indicate that the majority of users first try marihuana after they enter college, or are at least of college age. Table 24 shows the age at which UCLA marihuana users first tried the drug.

Taken together, these findings suggest that over the four year period, 1967-1970, the percentage of students who entered college with some marihuana experience behind them about doubled (from an average of about 18% to 35%). The majority of the users, probably between 62% to 85%, however, did not have their initial experience with marihuana until they entered college or were of college age.

Two surveys of junior and senior high school students, both conducted in 1969, show that use increases with age, but that the majority of those who had used marihuana did not initiate use until age 16 or later.

TABLE 23

Time Of First Use Among Carnegie-Mellon University
Undergraduate and Graduate Students

<u>Time of First Use</u>	<u>FR-MT*</u> (N=26)	<u>FR-MU**</u> (N=26)	<u>UC-MT***</u> (N=72)	<u>UC-MU****</u> (N=108)
In high school	50%	73%	--	--
After high school, before college	35%	23%	--	--
First year college				24%
Second year college				26%
Third year college			21%	24%
During graduate school			17%	

*Freshmen "marihuana tasters" (used only once) - 3.2%

**Freshmen "marihuana users" (used two to 10 times) - 3.2%

***Upperclass and graduate "marihuana tasters" (used only once) - 3.2%

****Upperclass and graduate "marihuana users" (used two to 10 times) -4.9%

TABLE 24

Age At First Use of Marihuana
Reported by Students at UCLA, 1970

<u>Age</u>	<u>N</u>	<u>Percent</u>
13 - 14	2	*
15 - 16	34	8%
17 - 18	139	33%
19 - 20	127	30%
21 - 22	50	12%
23 - 25	35	8%
26 - 30	20	5%
31 - 40	8	2%
Over 40	3	*
Total	418**	100%

*Less than 1%

**The age was unknown in 19 cases. Percentages based on an N of 418.

TABLE 25

Age At First Use of Marihuana Among Utah
and Maryland Secondary School Students

Utah Students		Maryland Students	
<u>Age</u>	<u>Percent</u>	<u>Age</u>	<u>Percent</u>
13 or under	. 7%	13	2%
14	1. 3%	14	4%
15	3. 5%	15	5%
16 +	7. 1%	16	6%
Never	87. 0%	17-18	2%

The age breakdown of first use of marihuana among secondary school students in Utah (Governor's Citizen Advisory Committee, 1969) and Montgomery County, Maryland (Elseroad and Goodman, 1970) is presented in Table 25 below.

The Commission's National Survey, conducted in August of 1971 found that 92% of all youth (12 to 17) but only 12% of all adults first heard or read about marihuana at age 14 or younger. About one-half of the youth (49%) had become aware of marihuana in this manner at age 11 or younger. By the time they were 14, 46% of all youth but only 3% of all adults first knew someone who had tried marihuana, and about one-fifth of the youth (19.4%) as compared with only 1% of the adults first felt curious about marihuana and thought they might try it sometime (Abelson, et al., 1972).

Table 26 shows the age at which all youth and adults, and those with and without marihuana experience first heard or read about marihuana, knew someone who tried it and became curious enough to think that they might try it sometime.

In addition to the findings that present day youth hear or read about, know someone who has used and become curious about marihuana much earlier than do adults, the data show significant differences among those who have tried marihuana and those who have not. Although there was no significant difference among youth who had and had not tried marihuana in the proportion who had heard or read about marihuana by the age of 14, about three-fourths of those with marihuana experience as compared to less than half of those

without it knew someone who had used the drug by the time they reached 14 years of age. Also, about four times as many youth with experience as those without it had become curious enough about the drug that, by age 14, they thought they might try it sometime.

One can conclude, therefore, that early knowledge of someone who used marihuana and the consequent peaked curiosity rather than simple awareness of the drug are the prime determinants of initial marihuana use among the present generation of youth.

Among the adults, all three factors played a significant role in determining initial use of marihuana. Adults who have had experience with marihuana were about twice as likely as those who are inexperienced to have heard or read about the drug (24.9% vs. 11.8%), about six times as likely to have known someone who used it (11.9% vs. 2.0%) and about four times as likely to think about trying marihuana (6.0% vs. 0.4%) by the time they were 14 years of age.

In short, knowledge of someone who had used marihuana appeared to be the prime predictor of early marihuana use among both youth and adults.

The Commission was also interested in determining at what age youth and adults first had the chance to try marihuana and whether or not they tried the drug at their first opportunity to do so. The findings of the National Survey found that 20% of all youth and 2% of all adults had their first opportunity to try marihuana at age 14 or younger but that only 9.1% of the youth and 9.3% of the adults did so.

TABLE 26

Percent of Youth and Adults Who First Heard or Read About,
Knew Someone Who Tried, or Thought They Might Try
Marihuana Sometime By the Age of 14

	<u>First Heard or Read About Marihuana</u>	<u>First Knew Someone Who Had Tried</u>	<u>First Became Curious and Thought They Might Try It Sometime</u>
<u>Total Population</u>			
Youth	91.5%	45.6%	19.4%
Adults	12.2%	3.3%	1.2%
<u>Marihuana Experience</u>			
Youth	92.1%	75.6%	58.0%
Adults	24.9%	11.9%	6.0%
<u>No Marihuana Experience</u>			
Youth	95.3%	42.1%	13.5%
Adults	11.8%	2.0%	.4%

Thus, while today's youth have an earlier chance to try marihuana than do present day adults, they are no more likely than the older generation to have tried the drug their first opportunity to do so.

Among both youth and adults, however, those with marihuana experience were significantly more likely than those who were inexperienced to have had their first chance to try the drug by age 14. The data show that 57% of the youth who had experience as opposed to 14% of those youth who have not, had their first chance to try marihuana at age 14 or younger. The corresponding figures for adults are .6% and .4%, respectively.

Again, however, there were no significant differences between youth or adults with marihuana experience in the proportions who actually tried it the first chance they had to do so (64% vs. 60%, respectively).

Table 27 shows the age at which youth who have tried marihuana had the first chance to do so as well as the age at which they actually tried it for the first time (if that did not occur upon the first opportunity to try it). Table 28 presents similar data for adults who are experienced with marihuana.

TABLE 27

Age At Which Youth Who Have Tried Marihuana
Had the First Chance to and Actually Tried Marihuana
(N = 109)

<u>Age</u>	<u>First Chance To Try</u>	<u>First Trial After First Chance</u>
11 or younger	9.8%	3.3%
12	5.1%	2.8%
13	15.0%	2.3%
14	27.6%	3.7%
15	22.4%	10.3%
16	15.4%	9.3%
17	2.8%	4.2%
No answer	1.9%	64.5%*

*These are the persons who used marihuana the first time they had the chance to try it.

How Marihuana Is First Obtained

Data from the Commission's National Survey have demonstrated that initiation to marihuana use ordinarily occurs in the course of normal social relationships. Very few youth or adults reported seeking out a nefarious drug pusher in their attempt to obtain marihuana. As Goode (1971b) has noted, drug dealers do, on occasion, attempt to sell drugs to young people, even in the schools.

However, this is apparently a rare occurrence. On the few occasions that this does happen, "peddlers" almost always sell to the students who are themselves dealers, and not to the neophyte whom they are attempting to recruit.

Data from the Commission's National Survey show that among the adults, only 3.6% of those who *ever used* and 8.7% of those who presently use marihuana reported purchasing the drug the

TABLE 28

Age At Which Adults Who Have Tried Marihuana Had
the First Chance to and Actually Tried Marihuana
(N = 445)

<u>Age</u>	<u>First Chance To Try</u>	<u>First Trial After First Chance</u>
14 or younger	6.0%	--
15 - 19	49.6%	31.1%
20 - 24	17.9%	6.1%
25 - 29	3.9%	.7%
30 - 39	4.7%	1.1%
40 - 49	1.1%	--
50 and older	1.0%	.3%
No answer	15.9%	60.4%*

*These are the persons who used marihuana the first time they had the chance to try it.

TABLE 29

How Marihuana Was Obtained
the First Time It Was Used

<u>How Obtained</u>	<u>Youth</u>	<u>Adults</u>
Bought It	5.1%	3.6%
It Was Given to Me	78.5%	62.4%
Other Way	7.0%	3.3%
No Answer	9.8%	30.6%

first time they used it. Among the youth, 5.1% of those with marihuana experience reported buying the drug the first time it was used (Abelson, et al., 1972).

By far, the largest percentage of youth and adults were introduced to marihuana by a friend who gave it to them.

Table 29 shows how youth and adults who are experienced with marihuana obtained it the first time they used it.

The Introduction to and First Use of Marihuana

The significant role of friends in the marihuana experience of both youth and adults is present from the very beginning.

The Commission's National Survey data show that more than two-thirds of youth and adults who ultimately tried the drug were introduced to it by a friend they knew well or an acquaintance they knew. Only 6% of the youth and 0.6% of the adults reported that a stranger had introduced them to marihuana (Abelson, et al., 1972). Table 30 shows the persons who first introduced the marihuana neophyte to the drug.

In view of the fact that friends most often introduce the neophyte to marihuana, it is not surprising that first use of the drug generally takes place in the company of friends. Further, because the use of marihuana is generally perceived as a social experience to be shared by others, one rarely uses the drug while alone. Only

TABLE 30

Who First Introduced the Neophyte to Marihuana

<u>Introduced By</u>	<u>Youth</u>	<u>Adult</u>
A Family Member	9.3%	3.3%
A Friend I Knew Well	62.1%	51.4%
An Acquaintance, Someone I Knew But Not Well	8.9%	13.0%
Someone I Had Just Met Through A Friend	4.2%	4.7%
A Stranger	6.1%	0.6%
No Answer	9.8%	27.0%

4% of the youth and 3% of the adults were alone the first time they used marihuana.

The data from the Commission's National Survey relevant to the company of the neophyte present during his first experience with marihuana are presented in Table 31 (Abelson, et al., 1972).

The Setting

In most instances one's first experience with marihuana takes place in the home of a friend, although a substantial number of youth report trying marihuana for the first time in a park or

on the beach. First use of marihuana rarely occurs in school or other public buildings and only occasionally occurs in one's own or one's parents' home. The data from the National Survey (Abelson, et al., 1972) relative to the setting in which the initial use of marihuana takes place are presented in Table 32.

The Planning

Many have wondered whether or not one who has decided to use marihuana does so "on the spot" or actually plans his first experience in advance. Data from the Commission's National

TABLE 31

The Persons With Whom Youth and
Adults Initiated Use of Marihuana

<u>Persons With Whom Marihuana Was First Used</u>	<u>Youth</u>	<u>Adults</u>
No one; by myself	3.7%	2.6%
A family member	8.9%	4.6%
One friend	34.1%	21.0%
A small group of friends (2-5)	33.6%	37.9%
A large group of friends (6 or more)	7.5%	4.7%
Other	1.9%	0.7%
No Answer	10.3%	28.4%

TABLE 32

The Place In Which First Trial
Of Marihuana Occurs

<u>Place</u>	<u>Youth</u>	<u>Adults</u>
My parent's home	1.9%	1.0%
My own home	5.1%	7.0%
A friend's home	29.9%	33.3%
A school building	6.1%	2.1%
A public building	--	1.0%
A park or beach	22.4%	5.7%
Other	19.2%	9.0%
No Answer	15.9%	40.7%

TABLE 33

Advance Planning for Initial
Trial of Marihuana

<u>Planned in Advance</u>	<u>Youth</u>	<u>Adults</u>
Yes	22.9%	14.6%
No	66.4%	56.9%
No Answer	10.7%	28.4%

Survey show that the initial experience is not planned in advance, but that youths are somewhat more likely than adults to have done some advance planning for their trial of marihuana (Abelson, et al., 1972). See Table 33.

In sum, today's youth are significantly more likely than their elders to have heard or read about, to have known someone who used and to have actually tried it themselves at an earlier age than their elders. For both youth and adults, however, one's initial experience with marihuana generally takes place in the company of friends who introduce them to the drug. Rarely is marihuana purchased the first time it is used and only occasionally is the initial use of marihuana planned in advance. The practice of marihuana use is from its very beginning a social or recreational activity shared by and with one or a few good friends.

The Marihuana User

The classic image of "turning on" to the use of an illegal drug, including marihuana, for the first time, is that of the "seduction of the innocent," a wanton and almost incidental corruption of a basically wholesome but unfortunately weak and naive young person. This view fails to grasp the reality of the drug conversion process in a number of ways. Most importantly, it ignores the basic fact that, even *before* using an illegal drug for the first time, the young person who eventually uses drugs is *already* different from his peer who does not, and will not, turn on to the use of drugs. In other words, drug use is not a process of seducing the completely innocent, but a question of at least a partial choice on the future user's part.

When a young person tries a particular drug for the first time, it is not a fortuitous event. It is the outgrowth of a range of structural and cultural realities. One is opportunity. In spite of recent declarations that marihuana is as easy to purchase as bubble gum, the truth is that a young person who has not had experience with drugs is unlikely to be sufficiently motivated to seek out a known dealer, or drug seller, in his school or neighborhood to make a purchase. Nearly all neophytes who use a drug for the first time are offered the drug in a social setting. But marihuana is not offered equally to everyone. Two different young people attending the same school, living in the same neighborhood, but with social, personality, and background characteristics which differ, will encounter quite different opportunities to try marihuana. And quite clearly, being offered a chance to try marihuana is only half of the equation. The characteristics of the young person determine not only being offered opportunities, but also the likelihood of accepting. In this section, then, it is necessary to spell out some of the dynamic processes underlying becoming a marihuana user.

Contemporary thinking on the etiology of marihuana use holds that there is no single "cause" impelling a young person toward turning on, or becoming a marihuana user. A wide range of factors contribute to this phenomenon; a multi-genetic approach must be adopted. Several in combination will make the likelihood of any given young person being, or becoming, a marihuana user extremely high. It is necessary to adopt a probabilistic approach in addition to a number of causes or associations. Erich Goode (1971b) suggests four sets of factors which are empirically correlated with marihuana use. They are not necessarily "causes" although they are associated with the use of marihuana. The first set of factors is

made up of *background* variables; some observers might label them *predisposing* factors in marihuana use. Of the many such variables which might be selected, the social class background of one's parents, sex, and religious background, are closely associated with marihuana use. (Interestingly enough, race does not appear to be significantly related to marihuana use.) Secondly, there are the many *situational features* of an individual's life; they can be thought of as *precipitating* factors. Geographical location, the urbanness of the community in which one lives, whether or not one attends college, the type of college one attends, one's friendship network, and so on, all have a great deal to do with whether any given young person uses marihuana, at least in a statistical sense. Thirdly, there are the many *social and behavioral correlates* of marihuana use. These are connected with marihuana use, but in an almost dialectical manner. None of them is "caused by" marihuana use, and marihuana use does not "cause" any of them, but they reinforce one another. Some social, attitudinal and behavioral correlates of marihuana use are: cigarette smok-

ing, drinking alcoholic beverages, political attitudes, religious beliefs and patterns of sexual behavior. The last of these four sets of associated variables is comprised of the *personality factors*.

THE AGE FACTOR

A number of researchers in recent years have observed that the decision to try marihuana is not made in a social vacuum. One rarely finds an individual who has tried marihuana but did not know of others, especially age peers, friends or close acquaintances, who were also using the drug. The process by which an individual eventually tries marihuana is closely tied to a series of subtle and related social and psychological phenomena. Trying marihuana depends in part upon knowing someone who uses it, hearing or reading about it and generally having an increasing sense of curiosity about the drug and the novelty of the experience associated with it. The National Survey found that among the youth, 56.5% knew someone who had tried marihuana by the time they were 15 years of age. Interestingly, 82% of the youth had heard

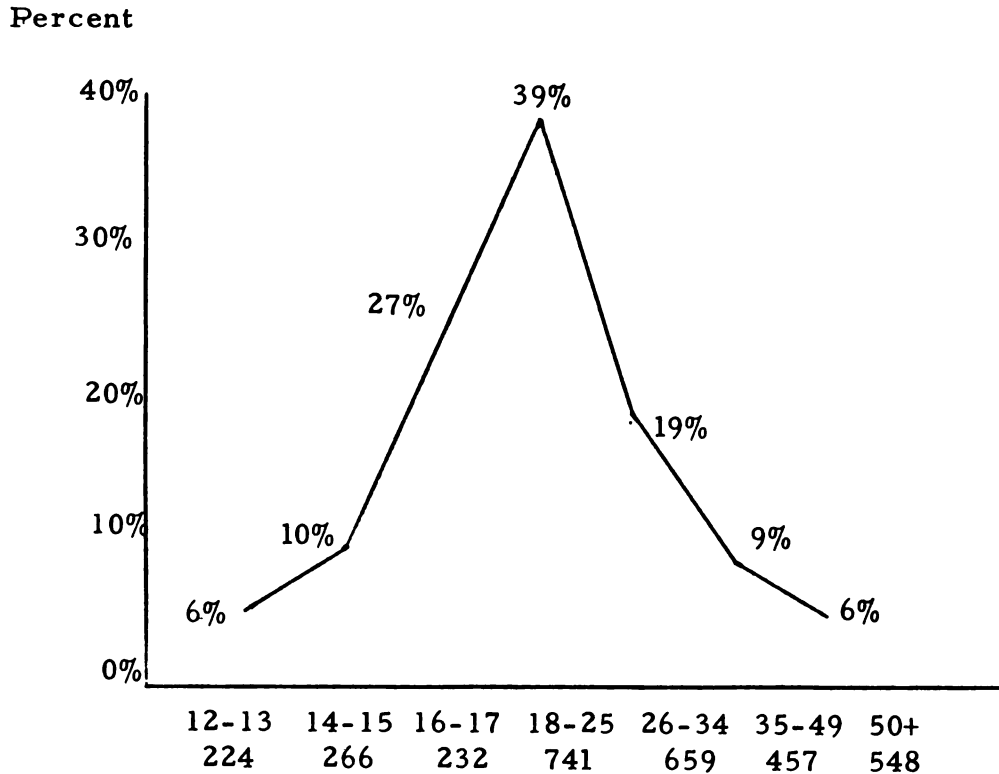
TABLE 34

Youth and Adults Who Used and Who Knew Someone Arrested, By Age

<u>Age</u>	<u>Ever Used</u>	<u>Knew Someone Arrested</u>
12-13	6%	15.2%
14-15	10%	34.2%
16-17	27%	52.6%
18-21	39.6%	53.4%
22-25	38.0%	40.4%
26-30	24.3%	30.3%
31-34	11.0%	23.0%
35-49	9%	23.6%
50+	6%	13.3%

FIGURE 2

Marihuana Experience by Age (all respondents)



of or read about marihuana by age 13. Likewise, 33.7% of the youth and 25.2% of the adults reported that they knew someone who had been arrested on a charge of selling or using marihuana (Abelson, et al., 1972).

Further, the National Survey indicates that the percent of youth who knew someone who had been arrested on a marihuana charge increased with age and marihuana experience. Conversely, among the adult population, those indicating knowledge of someone having been arrested on a marihuana charge decreased with age after 25 along with decreasing marihuana experience (Abelson, et al., 1972). See Table 34. The knowledge of persons having been arrested as well as having friends who use marihuana is related both to age as well as personal marihuana experience. As shown in Figure 2, marihuana experience increases with age to the peak point in the 18-25 age group after which it falls off sharply.

The Gallup Opinion Poll conducted in November-December, 1971, surveyed 1,063 college students on 57 campuses. The results show a clear

pattern of increase by age. Among the current users (those who used within the past 30 days), 25% were 18 and under, 68% were 19-20, 35% were 21-23, and 22% were 24 and over (American Institute of Public Opinion, 1972). A striking ex-

TABLE 35

Age of Persons Who Have Ever
Used Marihuana

<u>Men and Women</u>	<u>Percent</u>
18-24	40.5%
25-29	25.5%
30-34	15.0%
35-54	7.5%
55 and over	0.5%

ample of the age specific aspect of marihuana use is seen in the data reported by Manheimer and Associates of a 1969 survey of 1,104 adults 18 years and over in San Francisco (Manheimer, et al., 1969). See Table 35.

A study of drug use in the New York State General Population surveyed 7,500 persons 14 years and older in 1970. The findings, reported in 1971 are strikingly similar to those of the Commission as well as other researchers (Chambers, 1971). See Table 36.

TABLE 36

Age of Persons Who Regularly Use Marihuana

<u>Men and Women</u>	<u>Percent</u>
14-17	19.3%
18-24	51.3%
25-34	17.5%
35-49	5.3%
50 and over	6.6%

A study of 926 undergraduates and graduate students at UCLA conducted in 1969-1970 demonstrated a clear correlation between age and the use of marihuana (Nisbet and Vakil, 1970). See Table 37.

TABLE 37

Marihuana Users at UCLA.
By Age, 1969-1970

<u>Men and Women</u>	<u>Percent</u>
16-18	35.0%
19-20	48.3%
21-22	51.4%
23-25	56.3%
26-30	50.9%
31-40	33.3%
Over 40	12.0%

The 1970 *Playboy* survey of 7,300 students representing 200 college campuses provided further evidence of the age-use correlation. The data show that 41% of the 17 year olds had tried marihuana while 47% of the 22 year olds had tried the drug (*Playboy*, 1970). A study of 800 high school students (sophomore through senior) conducted at five high schools in Madison, Wisconsin in 1969 found that 23% had tried marihuana. The data show that the percentage of users increased with age; 20% of the user group were sophomores, 36% juniors and 46% seniors (Udell and Smith, 1969).

A further illustration of the relationship between age and marihuana use is found in a 1969 survey among the seventh and eighth grade students in San Mateo County, California (California Department of Health and Welfare, 1970).

The data point to an increase in the magnitude of 100% for both boys and girls between 7th and 8th grade.

RACIAL DISTRIBUTION

Race does not appear to be significantly related to becoming a marihuana user. Blacks and whites appear to have roughly equal chances of trying and using marihuana. The Commission's National Survey found that among persons 18 years of age and older, 15% of the white and 14% of the black respondents have had experience with marihuana. The data on those presently using indicated no significant difference; 5% of whites and 3% of blacks are present users. However, due to the differences in the proportion of whites and blacks in the total population, the majority of present marihuana users are white. Among adults, 88.9% of current users are white, 5.3% black and 0.5% are Puerto Rican or Latin American. Among the youth who presently use marihuana, 87.1% are white, 9.7% are black and 4.3% are Puerto Rican or Latin American (Abelson, et al., 1972).

The CBS Telephone Poll of 1,128 persons 18 years of age and older taken in 1970 showed 6% of white and 10% of non-white respondents had tried marihuana (CBS, 1970). In the New York State survey of the general population in 1968, there was almost no difference among racial groups in having knowledge of someone who has used marihuana or hashish. Black and white residents of New York State were equally as likely to personally know someone who used marihuana; these figures were 16% for whites, 15% for blacks, and 17% for Puerto Ricans (Glaser and Snow, 1969).

The racial factor was not significant in a 1969 survey of 932 high school students conducted for the Florida Youth Advisory Council. The study

TABLE 38

Percent of Seventh and Eighth Graders in
San Mateo County Who Had Used Marihuana
Within the Preceding 12 Months

	<u>7th Grade (1, 053)</u>	<u>8th Grade (1, 150)</u>
BOYS	(N=530) 10.9%	(N=553) 23.9%
GIRLS	(N=523) 10.7%	(N=597) 21.8%

TABLE 39

Knowledge of Someone Who Has Used Marihuana
Or Hashish

(All ages - 13 years and older--N=6, 105)

<u>Race</u>	<u>Marihuana %</u>	<u>Hashish%</u>
White	16%	3%
Black	15%	4%
Puerto Rican	17%	2%

reported 13% of all the respondents had tried marihuana with 14% of the white youth and 10% of the black youth reporting trial of the drug (Clarke and Levine, 1969).

The Merit Publishing Company's study of the "who's who" of high school students in 1970 turned up essentially the same finding—no significant differences by race. The question, "Do you use marihuana now?" revealed a yes response which was the same for blacks (8%) as for whites (9%). When asked, "If marihuana were legalized, would you use it?" a 21% yes response was elicited from whites and 16% from blacks. "Do you approve of marihuana use among high school students?" drew the following yes responses: blacks, 21%; whites, 21% (Merit Publishing Company, 1970).

The second Narcotic Addiction Control Commission study, conducted in 1970, corroborated this finding. The ethnic distribution of the total

sample was: white, 81%; black, 11%; Puerto Rican, 7%. The ethnic distribution was not significantly different from this when all regular marihuana users were examined: whites, 77%; blacks, 10%; Puerto Rican, 11% (Chambers, 1971). The closeness of the ethnic composition of all New York State residents, as compared with that of the group of all regular marihuana users, suggests that marihuana use does not vary significantly by race. (The slight overrepresentation among Puerto Ricans of regular marihuana users can no doubt be accounted for by the fact that they are heavily concentrated in New York City, and it is there that marihuana use happens to be most common.)

An extensive and in-depth study of the drug use patterns of the students of the 14 campuses in the New York area was conducted by sociologist Bruce Johnson (1972). Marihuana use did not vary along racial lines at all in this study. Fifty-six percent

of the whites in the study had tried marihuana—and 54% of the black college students in the study had done so. All of the differences in the studies cited, conducted on different populations, are trivial and insignificant. Race does not appear to be a factor in trying or using marihuana.

SEXUAL DISTRIBUTION OF MARIHUANA USE

Sex is obviously both a “background variable” as well as a “situational feature” of one’s current life. Gender is related to marihuana use, although not nearly so strongly as the use of other drugs. The Commission’s National Survey found that among adults 18 years of age and older, 21% of the men as compared with 10% of the women had had experience with marihuana. The Commission did find significant differences between the sexes among both youth and adult marihuana users. In all instances, males outnumbered females in a ratio of about two to one. Among present adult users, 69.7% are male and 30.3% are female. Among youth, 60.2% are male and 39.8% are female. The ratio of men to women remained about the same among those reporting current use of marihuana with 7% of the men and 3% of the women currently using (Abelson, et al., 1972).

The 1970 CBS Survey indicated that among 18 year olds and over, 9% of the men, contrasted with 3% of the women, had tried marihuana (CBS, 1970). A similar finding resulted from a survey of Midwest college students in which 35% of the men and 12% of the women reported experience with the drug (McCain, et al., 1970). Findings showing a ratio of 2 to 1 of men to women are reported in surveys conducted among high school students in Utah and Florida (Governor’s Citizen Advisory Committee, 1969; Clarke and Levine, 1969).

The *Playboy* College Survey of 7,300 students showed males to be more numerous among those with marihuana experience with 51% of the men and 39% of the women reporting trial of the drug (*Playboy* Survey, 1970).

With heroin addiction, the sex ratio is extremely lopsided; roughly 75–80% of all addicts turn out to be male (Hamburger, 1969). The Narcotic Addiction Control Commission study of 1970 found that about two regular marihuana users were male for every one that was female (Chambers, 1971). In a 1970 survey of students attending a course in “deviance and delinquency” at a large state university, Goode (1970) found a fairly small, although significant, difference between the sexes in the proportion ever trying marihuana—65% for women and 78% for men. This edge has been turned up in a wide range of studies in various locales—men tend to try and use marihuana significantly, but not strikingly, more than is true of women.

This difference may be narrowing, however. In one recent survey of adolescents age 12 to 17, young men and women were equally as likely to have tried marihuana (Josephson, et al., 1971). This could conceivably mean something of a convergence in patterns of drug use. Males outnumbered females when the activity, smoking marihuana, was a rare and marginal one. As it became more and more accepted, and practiced by larger and larger numbers of young people, the sex differences became smaller and smaller.

A study of 595 students at the University of Maryland conducted in 1969 compared marihuana and hashish use among men and women with data from earlier surveys conducted during 1967 and 1968. The data show a clear trend toward an increasing proportion of females among the total population of those who have tried marihuana (McKenzie, 1970).

TABLE 40

University of Maryland Students (Tried Marihuana - N=595)

	<u>1967</u>	<u>1968</u>	<u>1969</u>
Male	28.6%	35.9%	43.6%
Female	8.4%	15.9%	29.3%

In the Gallup Poll of 1,063 students on 57 college campuses conducted in November–December, 1971, 36% of the males and 23% of the females were currently using marihuana (American Institute of Public Opinion, 1972).

It is probably still true, however, that at the *upper reaches* of drug use, that is, among frequent users, women tend to be less common than men; sex disparities become greater. Women are more likely to be infrequent and episodic users, if they do smoke marihuana. In Goode's study (1970), only one woman in ten (10%) had smoked marihuana three times a week or more in the previous six months, but this was true of one man in four (25%). Large sex differences were also found in the likelihood of using other drugs.

MARIHUANA USE AND POLITICAL ATTITUDES

Political attitudes and orientation are also tied in with marihuana use; the use of cannabis and a leftish ideology are very likely to be found together. This does not mean that all marihuana users are revolutionaries or radicals—nor that all radicals are marihuana smokers. It means that the two are correlated in a significant manner. The results of a Gallup Poll conducted among a nationally representative sample of college students in 1969 showed that about five times as many students who identified themselves as “extreme liberal” (49%) as those who said they were conservative (10%) had smoked marihuana (American Institute of Public Opinion, 1969).

On the measure of political *activism*, 15% of the students who had never participated in a political demonstration had ever used marihuana, but this was true of 40% of those who had taken part in some demonstration. In a 1969 survey of a representative cross-section of American youth age 17 to 23, college and non-college alike, an extremely strong relationship was discovered between attitudes toward the marihuana prohibition and self-designated political ideology. Among those who said that they were “revolutionary” in their political views, close to all (92%) said that they “rejected outright” the marihuana prohibition. This figure dropped more and more the further right one moved politically—45% for “radical reformers,” 32% for “moderate reformers,” 13% for middle-of-the-roads, and 7% for those who called themselves conservatives (CBS, 1969).

In a survey of students at Carnegie-Mellon University in 1968, the pattern for both the one time users as well as the more frequent marihuana users indicates a predominance of marihuana experience among persons identifying themselves as being more liberal or having no interest in politics (Goldstein, et al., 1968).

In Richard Blum's survey of drug use on various California campuses (Blum, et al., 1969b), a high association was found between politics and the use of all drugs. “On the political spectrum which reads from right to left, one finds abstainers consistently more conservative. . . . With all classes of drugs, experience is greater as one continues to move left” politically. The users of illegal drugs are “underrepresented among conservatives . . . and overrepresented in the left and radical groups.” Moreover, not only were political beliefs correlated with the use of illegal drugs, including marihuana, but political activism as well: “On every class of drug the students who described their political involvement or commitment as active are in the group with the highest proportion of drug experience” (Blum, et al., 1969b: 69–70).

The CBS Telephone Poll conducted in 1970 did not find any vast differences between persons who considered themselves Democrats and those who were Republicans. The data showed that 5% of the Republicans and 7% of the Democrats had tried marihuana. Among those who wanted to try the drug, 8% were Democrats and 5% were Republicans. Among those identified as Independent/Other, 13% had tried marihuana while 12% indicated that they would like to try the drug (CBS, 1970). In a 1969 study of 5,050 colleges and universities (Gergen, et al., 1971), a pattern of marihuana use and political affiliation similar to the findings of other researchers was elicited; 29.8% of the students who regarded themselves as Democrats reported having used marihuana as contrasted with 17.2% of the Republicans. Among the Independents, 43.4% reported having tried marihuana as compared with 80.1% of those who regarded themselves as Radicals or had no political interest.

A review of research concerning marihuana use and political identity tends to provide evidence that experimentation with marihuana is positively correlated with an interest in and an awareness of social issues. Heavy users, however, tend to be the antithesis of this. There is some evidence to

TABLE 41

Political Orientation of Marihuana Users
Carnegie-Mellon University

	Freshmen Marihuana Tasters* (N=26) 0%	Freshmen Marihuana Users** (N=26) 12%	Upperclassmen Marihuana Tasters (N=72) 3%	Upperclassmen Marihuana Users (N=108) 8%
<u>Extreme Liberal</u> 1				
2	46%	62%	33%	36%
3	8%	12%	26%	18%
4	15%	0%	6%	7%
5	12%	0%	12%	6%
6	0%	0%	1%	3%
<u>Extreme Conservative</u> 7	0%	0%	3%	1%
<u>Cannot Represent</u>	8%	8%	7%	14%
<u>No Interest in Politics</u>	12%	4%	8%	6%

* One time user of marihuana.

** Used marihuana between two and 10 times.

N. B. No other illegal drugs were used by these groups.

Percents are rounded to the nearest whole number and may not add to 100 due to rounding and blank responses.

support the view that marihuana users are more politically active and tend to be more politically liberal.

It should not be assumed, however, that marihuana is used exclusively by middle and upper-middle class liberals, and especially those in colleges and universities. As one group of researchers has pointed out:

... marihuana is by no means used only by upper middle class political liberals who live on the East and

West Coasts and in certain isolated spots scattered across the nation. Many of the poor who live in our urban ghettos use marihuana, among other drugs, as do an increasing number of so-called middle-to-lower-middle-class youths, some of whom have no interest in politics, our foreign policy, or racial problems (Brenner, et al., 1970).

It may well be that if marihuana use continues to increase those who try the drug will reflect a broader spectrum of political ideology as well as a greater degree of political participation.

TABLE 42

Type Community and Marihuana Use
Florida High School Seniors
(N = 932)

	<u>Percentage</u> <u>Marihuana Users</u>
Large City (250, 000)	17%
Medium (25, 000-50, 000)	14%
Small (< 25, 000)	9%
Rural	8%

**POPULATION DENSITY, RESIDENTIAL
ACCOMMODATION AND GEOGRAPHIC
FACTORS**

One of the situational features of one's life referred to earlier and relevant to "turning on" to the use of marihuana is the size of the community. There appear to be genuine differences between urban and rural areas; cities and suburbs of cities tend to have higher rates of marihuana use than rural areas. This does not mean that rural areas are completely lacking in marihuana use—it is

simply less common. Studies conducted in a wide range of different settings have revealed that marihuana use is significantly more likely, in a statistical sense, in metropolitan and suburban areas than in more rural areas (De Fleur and Garrett, 1970; Simon and Gagnon, 1971; Josephson, et al., 1971; Goldstein, et al., 1970).

A study of Florida high school seniors in 1969 also illustrates the urbanness of marihuana use (Clarke and Levine, 1969).

An additional situational factor is place of residence. The opportunity to both freely associate

TABLE 43

Place of Residence and Frequency of
Marihuana Use (University of Maryland)
(N = 595)

	<u>Never</u>	<u>Experimental</u>	<u>Occasional</u>	<u>Frequent</u>
University Housing	66.8%	7.7%	17.3%	8.2%
Off-Campus (with family)	75.5%	7.5%	13.9%	3.2%
Off-Campus	50.8%	10.5%	27.1%	11.1%

TABLE 44

Geographic Location and Marihuana Use,
CBS Telephone Survey (N = 1, 128)

	<u>Has Not And Will Not Try</u>	<u>Wants To Try</u>	<u>Has Tried</u>
East (N=265)	84%	8%	8%
South (N=335)	88%	8%	3%
Mid-West (N=349)	90%	4%	5%
West (N=179)	82%	7%	12%

with persons who use marihuana and having the opportunity to use the drug figure in whether or not an individual will try and use marihuana. A study of 595 students at the University of Maryland showed that students living off-campus but not with their family accounted for the highest percent of marihuana use in all three categories: experimental, occasional and frequent use. Those in university housing were ranked second; those living off-campus with their families ranked last (McKenzie, 1970).

A finding similar to that of the University of Maryland study was ascertained in a Carnegie-Mellon University survey and also in a study of 26,150 students in the Denver-Boulder Metropolitan area (Goldstein, et al., 1970; Barter, et al., 1971).

A number of researchers have found that there are significant differences in marihuana use in different regions of the country. Experience with marihuana appears to be highest in the East and West; lowest in the South and mid-range for the mid-West or North-Central areas. A CBS telephone survey conducted in 1970 illustrates the differences (CBS, 1970).

Similar findings pointing up differences in marihuana experience by region have been found in a nationwide survey of 38 colleges and universities involving a sample of 5,050 students (Gergen, et al., 1969; Josephson, et al., 1971).

The National Survey of the Commission confirmed trends which other researchers have reported in recent studies. The following table summarizes these findings.

The data presented point to the fact that those who ever used marihuana as well as those who are

present users are concentrated in the West and Northeast. The percentage of those in the North-Central area who had tried (ever used) marihuana was somewhat higher than has been found in other surveys. Among the youth (12-17) in the National Survey who had ever used marihuana (N=109), the geographic distribution is even sharper; 25.6% were in the West, 16.5% in the Northeast, 13.1% in the North-Central region and 6.8% in the South. The marihuana user, both adult and youth, is more likely to be from the Northeast or the West than from the North Central area or South. For those adults who presently use marihuana, 36.1% were from the Northeast and an identical percentage lived in the West, 19.2% came from the North-Central area and 8.2% were from the South. Among youth, the patterns are substantially the same except for a higher percentage in the North-Central area. The data show that 36.6% of present youthful users are from the Northeast, 29.9% from the West, 25.3% from the North-Central area and 9.2% from the South (Abelson, et al., 1972). In the table presented above there is a clear picture of marihuana experience concentrated in the urban or suburban areas which are related to large as well as smaller metropolitan centers.

EDUCATIONAL ACHIEVEMENT

As we have noted, there are a number of situational features of one's life relevant to "turning on" to the use of marihuana. One of these situational factors is educational status and educational achievement. College youths tend to use marihuana more than is true of their non-college

TABLE 45

Adult Experience with Marihuana

	<u>Ever Used</u> (N=445)	<u>Use Now</u> (N=157)
<u>Region</u>		
Northeast	20%	7%
North Central	19%	3%
South	5%	1%
West	21%	10%
<u>Population Density</u>		
Large Metropolitan Area	20%	7%
Smaller Metropolitan Area	18%	5%
Non-Metropolitan Area	7%	1%
<u>Type of Area</u>		
City/Town	17%	5%
Suburbs	15%	6%
Rural or Non-Suburban	7%	1%

peers. The Columbia Broadcasting System, in 1969, conducted a nationwide poll of both college and non-college youths ages 17-23; college students were significantly less likely to say that they "accept" the marihuana prohibition (48%) than was true of the non-college youths (72%), and significantly more likely to say that they "reject outright" the marihuana prohibition (31% vs. 17%) (CBS, 1969).

A Louis Harris Poll conducted in 1970, the results of which were summarized in the January 8, 1971 issue of *Life* magazine, showed that college students were significantly more likely than high school students to know someone who used marihuana (83% vs. 62%) and to favor the legalization of marihuana (53% vs. 30%). Although the significant factor in this relationship may be age rather than educational level, *per se*, it is true that a minority of all high school students do go to college.

Some evidence also demonstrates that colleges and universities with higher academic standards include among their student bodies a larger proportion of marihuana-using young people than

colleges and universities with lower academic standards.

In his survey of 3,500 college students in 20 New York City area colleges and universities, Johnson (1972) found that "the rate of cannabis use increases with the quality of the college." He noted, however, that "schools of the very lowest quality have a fairly high rate of cannabis use." The following table reproduced from Johnson's study graphically illustrates his findings.

In one study conducted in 1966, 19% of the students attending "highly selective" colleges had tried marihuana, but this was true of only 1% of the students at the "least selective" colleges (Bowers, 1968). Naturally, the figures have probably risen in schools of all levels of quality since 1966. It is also probably true that colleges and universities located in or near metropolitan areas, or which enroll a high proportion of students from these areas, stand a higher chance than more rural colleges or colleges with a more rural student population that a sizeable proportion of their student body will "turn on." Further, colleges with a formal religious connection include students with

TABLE 46

The Relationship Between the Quality
of the College and the Incidence of
Marihuana Use

	<u>Elite</u>	<u>High</u>	<u>Medium</u>	<u>Low</u>	<u>Lowest</u>
% Ever Used Cannabis	66	57	50	43	56
N=	505	765	878	681	481

a lower likelihood of using marihuana than secular institutions. Schools located either in California or in the Northeast United States probably contain a higher proportion of marihuana-using students than schools located in the South or Midwest.

In a nationally-representative Gallup Poll conducted in 1969 of Americans age 21 and over, only 1% of the respondents with a grade school education had ever tried marihuana, but this was not quite ten times as high (or 9%) for those with a college education (American Institute of Public Opinion, 1969). The New York State Narcotic Addiction Control Commission's study conducted in 1970 found a strong relationship between education and having used marihuana, as well as using marihuana currently (Chambers, 1971); the greater the amount of education the respondent had, the higher the likelihood that he or she used marihuana. The educational distribution of marihuana users in the study was significantly higher than the average level of education of the entire sample. About 42% of the total sample had less than a high school education, but only 3% of the marihuana-using respondents had less than a high school education. Only 26% of the sample had more than a high school education, but 42% of the marihuana users had more than a high school education. Ideally, education and marihuana use should be correlated, controlling for age. This is a small part of the equation, however. In short, being well educated increases one's chances of trying and using marihuana. Present findings seem to indicate that the greater number of years spent in school is positively associated with marihuana experience.

The Commission's National Survey also found a significantly higher rate of marihuana experience to be positively correlated with educational status or achievement. The table presented below

shows that for both *present users* as well as those who *have ever used* marihuana, the highest rate is among the *Now a Student* category followed by those with *Some College* and those who were *College Graduates or Beyond* (Abelson, et al., 1972).

In the Columbia Broadcasting System telephone survey, those with some college were nine times more likely than those with a grade school education to wish to try marihuana; those who were college graduates were 11 times more likely. Among those *who tried marihuana*, those with some college were three times greater and college graduates four times greater than the group with a grade school education (CBS, 1970).

Present evidence suggests that the college marihuana user is generally average or above average in terms of grades or achievement rating. The 1970 study of 1,400 students at UCLA (Hochman and Brill, 1971) points to the fact that among the freshmen, sophomores, juniors and seniors, the overwhelming majority of occasional users⁴ and chronic users⁵ were within the "B" and "C" range with the highest percentage in the "B" grade average. The findings of several other studies have also shown that significant numbers of persons in the *ever used* category have academic achievement ratings in the "B" or higher range (Gergen, et al., 1969; Elseroad and Goodman, 1969; Killinger, Hersker and Georgoff, 1970). There is little if any verified evidence to support the notion that marihuana use *by itself* causes academic failure, underachievement or dropping out of school (Walters, Goethals and Pope, 1971).

⁴ Total use from a minimum of 10-50 times in the past year, to a maximum of two times a week for up to three years.

⁵ Use to the present, of from three or more times per week up to daily, for two years, or three or more times a week for three or more years.

TABLE 47

Marihuana Experience and
Educational Level
Adults (N = 2,405)

	<u>Ever Used</u>	<u>Use Now</u>
8th Grade or Less	5%	0%
Some High School	11%	3%
High School Graduate	14%	4%
Some College	25%	8%
College Graduate and Beyond	21%	6%
Now a Student	44%	23%

(How to read table: Example: 5% of those adults with an 8th grade education or less have tried marihuana; 0% of this group presently uses the drug.)

Several studies point to alcohol consumption and not marihuana as being correlated consistently with lower grades. A survey conducted by the Michigan Department of Public Health in 1968 of seniors in five widely diversified high schools found a consistent pattern of lower grades among drinkers. The researchers found, however, that "no overall statement can be made about association of marihuana and grades" (Bogg, et al., 1969). A study of 500 Harvard undergraduates concluded that the only drug correlated consistently with lower grades was alcohol (Walters, et al., 1971).

SOCIOECONOMIC STATUS

Analysis of data concerning socioeconomic status and marihuana use indicates that children of better educated, more affluent parents with high prestige occupations have a greater likelihood of using marihuana than children of less well-educated parents with lower prestige occupations. This does not mean that no child of less affluent parents will use marihuana. What it does mean is that there are striking and significant differences in frequency and incidence of use along the dimension of income, education and occupational prestige.

The 1971 Columbia University School of Public Health survey of a representative sample of American youth age 12 to 17, verified this generalization. Among adolescents from families with an annual income of under \$10,000, only 6% had ever tried marihuana. Young people from families

earning \$15,000 and over were *three times* as likely to have used marihuana; 19% had tried marihuana in the more affluent group (Josephson, et al., 1971).

A study of the drug use patterns of a sample of high school students in Michigan in 1968 found a striking correlation between trying and using marihuana and the education of one's father. Among those high school students whose fathers were college graduates, 22% said that they had tried marihuana; this was true of only 6% for those whose fathers had not graduated from high school. (The in-between educational levels were also in-between in trying marihuana as well.) In addition, over twice as many children of the well-educated fathers believed that marihuana was beneficial or harmless (48%) as was true of children of the less well-educated (21%). Believing that marihuana is harmful was highly correlated with having a poorly educated father (Bogg, et al., 1969).

A survey of 3,000 high school students in Vermont found a positive association between socioeconomic status of parents and the likelihood of using illicit drugs—which was nearly always marihuana. Education was directly correlated with turning on to the use of drugs, particularly marihuana. Among non-users, 33% had a father with a college education; among users, this was 52%. Turning the equation around, of all those students with a father who did not have a college education, 6% said that they had used drugs; but this was true of 12% of those with college-educated fathers.

This relationship held up even when residence (urban vs. rural) was held constant (Leahy, et al., 1971). The authors of this study speculate: "The users show a higher educational background for the father than the non-users which may suggest a greater intellectual stimulation in the home as a predisposing factor for the students' curiosity."

Another study of a 10% random sample of grades 8 through 13 in six school districts in British Columbia (about 3,500 adolescents) found a remarkable relationship between marihuana use and *monthly spending money*; the more money the young person had, the greater the likelihood of using marihuana (Russell, 1970). Of those students who said that they had less than fifty cents spending money per month, 83% said that they had never used marihuana; this was true of 89% of the students who had between fifty cents and ninety-nine cents, and 90% of those with one dollar to less than three dollars. But it was true of 75% of those who had between nine and 11 dollars and 68% of those with over 11 dollars a month. This may be an accidental association with social class of parents, or it may be that spending money, by itself, has an independent impact on the likelihood of using marihuana for young people.

The same sort of relationship which held true between using marihuana and the social class *background* of an individual also applied to *present* social class position and education. Individuals who themselves have high incomes, are well educated, and work at relatively high-prestige occu-

pations (holding constant other important social characteristics, such as age).

A survey conducted in 1968 by the New York State Narcotic Addiction Control Commission, of a representative sample of 6,000 New York State residents found a positive association between education and family income, and "personally knowing someone who used marihuana in the past year" (which is itself highly associated with using it oneself). Only 11% of the sample who had some high school education said that they knew a marihuana user; this was 15% for high school graduates, and the figure went up to 23% for those with at least some college education or more. Twelve percent of those who lived in a family whose weekly household income was under \$100 a week knew someone who used marihuana, but this figure increased regularly to 19% for those living in families which earned over \$200. Obviously, income, education, and social class were associated with knowing a marihuana user—and with using marihuana oneself (Glaser and Snow, 1969).

The Commission's National Survey found that among adults (18 and over) with marihuana experience there was a striking association between family income and marihuana experience (ever tried). The percent of persons who had ever tried was highest (18%) in the \$15,000 to \$24,999 income category. For those who presently use marihuana, the highest percent was found in those families reporting an income of \$25,000 or more (Abelson, et al., 1972).

TABLE 48

The Relationship Between Marihuana
Experience and Family Income

Adults (N = 2, 405)

<u>Income (family)</u>	<u>Ever Used</u>	<u>Use Now</u>
\$4, 000 or less	12%	4%
\$5, 000 - \$9, 999	16%	4%
\$10, 000 - \$14, 999	17%	4%
\$15, 000 - \$24, 999	18%	5%
\$25, 000 - or more	15%	7%

At the present time, the use of marihuana is strikingly a middle class, middle-middle, upper-middle income phenomenon. The Commission's National Survey found that among adults who *have ever used* marihuana, 50.3% were from families where the income was ten thousand dollars and over, 25.7% were in the \$10,000 to \$14,000 bracket; 18.3% were in the \$15,000-\$24,999 bracket and 6.3% were from families where the annual income was \$25,000 and over. For those adults *presently using* marihuana, 51% were in the \$10,000 and above annual income bracket. The data show the presence of a slight shift towards an increasing number of persons in the highest income bracket. Among those who *use marihuana now*, 22.6% were in the \$10,000-\$14,000 bracket; 18.3% in the \$15,000-\$24,999 income category and 10.1% came from families where the annual income was \$25,000 or over.

In a study of 2,221 high school students, Blum (1969) found the use of marihuana to be much

higher among youth in the middle class high school than among those in the lower-middle class high school. A 1969 survey of 800 Wisconsin high school students found that the percent of marihuana users was highest among youth from families listed among the top four occupational categories, including administrative/managerial, educator, sales, other professional including physicians (Udell and Smith, 1969). William McGlothlin in his analysis of marihuana use, distribution and control (1971a), notes the results of the Spring 1969 Gallup Opinion Survey; 30% of the students whose parents' income was \$15,000 or over had reported use of marihuana in comparison with 12% of those whose parental incomes were under \$7,000.

A study of 932 high school students in Florida showed the percent distribution of users to be highest in the higher family income brackets (Clarke and Levine, 1969).

TABLE 49

Family Income and Marihuana Experience
Among Florida High School Students
(N = 911)*

<u>Family Income</u>	<u>Non-Users</u>	<u>Users</u>	
Less than \$4, 000	91%	9%	100%
\$4, 000 - \$7, 999	88%	12%	100%
\$8, 000 - \$11, 999	88%	12%	100%
More than \$12, 000	80%	20%	100%

*Number of codable responses to this question out of a total response of 932.

A number of recent college student surveys have provided additional evidence that marihuana experience is more likely among persons from more substantial economic circumstances (Ewing, et al., 1969; Goldstein, et al., 1970; *Playboy*, 1970; CBS, 1970; Gergen, et al., 1971).

The data point to a complex series of interacting social, psychological and economic factors which tend to influence significantly whether or not an individual, particularly a student, will try marihuana. The educational and economic achievement of the parents are significant in affecting the psycho-social outlook of the youth in terms of the acceptability of marihuana. The socioeconomic status and mind-set of one's peers undoubtedly plays a significant role in promoting or discourag-

ing certain types of behavior. Finally, the longer an individual remains in school the greater is the likelihood that he will come to know persons who use marihuana and to have increased opportunity to try the drug, and to actually use marihuana, himself.

USE OF ALCOHOL AND TOBACCO

The leap from parental drinking and smoking to the use of illegal drugs by the young is not typically direct. The link between the two is often the drinking and smoking of the young people in question. Data indicate that the adolescent or young adult who drinks alcoholic beverages and smokes tobacco cigarettes stands a higher statisti-

cal probability of eventually using illegal drugs, from marihuana to heroin, than do his peers who do not drink or smoke. The possibility exists that parental use of alcohol and cigarettes "leads to" or strongly influences the use of alcohol and cigarettes by their children, which, in turn, may increase the likelihood of using illegal or dangerous drugs.

Too often the cliché is accepted that alcohol is the drug of choice of the older, "establishment" generation, and marihuana the drug of the younger, dissident generation. Yet some observers might be surprised to find that liquor is used more heavily by the drug-using young than by those who do not use drugs. The two are often thought to be competitors, but, in fact, both are used. Young people who use illegal drugs are fundamentally the same people, socially and psychologically, as those who use alcohol and cigarettes—they are simply a bit further along the same dimensions. Persons who abstain from liquor and cigarettes are far less likely to use illegal drugs than are those who use these legal drugs. This appears to be somewhat more strongly the case for cigarettes than for alcohol, but both are statistically correlated with illegal drug use.

In a nationally-representative survey conducted in May 1971 by members of Columbia University's School of Public Health, the powerful continuity between cigarettes and alcohol, and illegal drug use (in this case, marihuana) among American youth was verified (Josephson, et al., 1971). Only 3% of all non-smokers in the sample had ever tried marihuana, but 50% of all current cigarette smokers had done so—over fifteen times as many! The authors of this report conclude that their data support "the fairly plausible assumption that cigarette smoking is a precursor of marihuana use." Likewise, alcohol consumption correlated strongly with marihuana use. A question in the survey was asked concerning drinking liquor "outside the family setting." While only 2% of the non-drinkers had ever tried marihuana, this was 27% among drinkers. Although the authors of this study make no assumptions concerning the priority of these forms of behavior, typically the use of tobacco and liquor precedes the use of marihuana in the United States. In this sense, cigarettes and alcohol can be thought of as "precursors" of marihuana use.

In a survey conducted by Goode among students attending a course at a large state-supported university in February 1970, a strong correlation was found between smoking cigarettes and the use of all illegal drugs (Goode, 1971a). Current cigarette smokers were about twice as likely to try and use any and all illegal drugs as were non-smokers of

tobacco cigarettes. For every drug, without exception, the percentage of smokers (regardless of how much they smoked per day) who used it was roughly two times the percentage of non-smokers who did. For instance, only 13% of the smokers of one to nine cigarettes a day, 17% of the smokers of 10 to 19 cigarettes per day, and 13% of the smokers of a pack a day or more had *not* smoked marihuana in the six months prior to the survey. This was true, however, of 47% of the non-smokers.

Whereas 13% of the non-smokers had tried LSD once or more in their lives, this was true of 28, 32, and 34% of the smokers. The same was true of methamphetamine (6% versus 12%, 12% and 10%), barbiturates (8% versus 17%, 21% and 20%) and all illegal drugs, including heroin. While only 2% of the non-smokers had tried heroin once or more in their lives, this was true of 5% of the light smokers, 4% of the moderate smokers and 6% of the heavy smokers. This is not to say that an automatic causal relationship can be inferred from these figures, but the statistical correlation between cigarette use and the use of all dangerous drugs is striking.

A 1968 survey of the patterns of drug use among a cross-section of Michigan high school students found that of all the relationships explored in the study, "the strongest statistical relationships of the entire study were between alcohol-tobacco usage and marihuana usage" (Bogg, et al., 1969). The authors further state: "Such relationships suggest that there are several overall similarities in the way that these substances are regarded by adolescents." Not only were smokers and drinkers more likely to turn on to marihuana, they were also much more likely to think of marihuana as harmless. The authors conclude: "It is possible that drinking leads to an increasing confidence in the safety of drugs. On the other hand, drinkers may be a select group to begin with, a group without deep suspicions of drugs."

Between one and two percent of the non-drinkers in this Michigan study had tried marihuana, but one student in five, or over ten times as many of the young people who drank alcohol had at least tried marihuana. The same was true of cigarettes; 5% of the non-smokers had used marihuana once or more but just under 25% of the cigarette smokers had also smoked marihuana, a five-fold increase. These associations were both significant and striking.

In Blum's 1966-1967 study of drug use on five campuses, significant and positive correlations were found between the use of alcohol, cigarettes and all dangerous drugs (Blum, et al., 1969b). The strength of these relationships varied; some were

much more substantial than others, but all were statistically significant. One of the strongest of all the relationships was the marihuana-tobacco correlation—a stronger association, in fact, than the one between marihuana and the use of opiate drugs. Most of the statistical associations between the various drugs were considerably weaker than the one between marihuana and tobacco.

In a study of 2,777 junior and senior high school students in Montgomery County, Maryland, in 1969, the percent of students with marihuana experience who also smoked cigarettes and/or used alcohol was strikingly higher than that among students without marihuana experience. Among those students reporting present marihuana use 91% used alcohol and 92% used cigarettes (Else-road and Goodman, 1969). In a 1969 study of Wisconsin high school students, 99.8% of those who used marihuana have had experience with alcohol. In this study, 41.3% reported infrequent use of alcohol while 39% reported frequent use of alcohol. Only 14.5% of the non-users of marihuana were frequent users of alcohol (Udell and Smith, 1969).

In the general population survey of 14,748 respondents conducted by *Psychology Today* (Popoff, 1970), 47% of the sample were found to have tried marihuana. Forty-six percent of the respondents used tobacco daily and 14% used alcohol at least once a day. The study further reported that "regular users [of marihuana] also tend to be tobacco smokers. About 60% of the respondents who use marihuana at least once a week smoke tobacco daily." The study goes on to say that

"about 67% of those who never use tobacco have never tried marihuana" (Popoff, 1970:52).

The National Survey conducted for the Commission by Abelson and his colleagues (1972) showed marked relationships between marihuana usage and the use of alcohol and cigarettes. Among the adult population surveyed, those who presently use marihuana consumed alcohol far more frequently than those who have never tried the drug. This holds true for beer, wine and hard liquor. Table 50 clearly demonstrates the differences in alcohol consumption by those who presently use marihuana when compared with those who have never used marihuana. Table 51 shows that the differences are very striking through most of the frequency categories and only diminish at the highest levels of frequency.

When a comparison of the use of alcohol is drawn between adults and youth who have and have not tried marihuana, the results are quite dramatic. The data illustrate the fact that persons who have used marihuana do, in fact, try (and often use) other drugs, in this case, alcohol. Table 51 shows that among adults who *have ever used marihuana* the percent having used beer, wine or hard liquor in the month prior to the survey was nearly double that found in the *never used* group. Among the youth, the differences were even greater for the *ever used marihuana* group in terms of alcohol use during the month prior to the survey.

A number of researchers have pointed to the association between smoking cigarettes and using marihuana. The Commission's National Survey

TABLE 50

The Relationship of Marihuana Experience
To the Consumption of Alcohol

<u>Used Within Past 30 Days</u>	<u>Marihuana</u>		<u>Marihuana</u>	
	<u>Adults (18 and Older)</u>		<u>Youth (12-17 years)</u>	
	<u>Ever Used</u>	<u>Never Used</u>	<u>Ever Used</u>	<u>Never Used</u>
Beer	58.9%	32.1%	63.9%	14.6%
Wine	36.8%	15.1%	39.7%	10.2%
Hard Liquor	51.9%	30.8%	36.0%	7.0%

TABLE 51

The Relationship Between the Frequency of Alcohol Use
and Marihuana Experience

No Marihuana Experience--N=3, 208 (weighted)
Use Marihuana Now--N=208 (weighted)

Number of Days on Which Respondent Drank Out of Last 30 Days	BEER		WINE		HARD LIQUOR	
	No Marihuana Experience	Use Marihuana Now	No Marihuana Experience	Use Marihuana Now	No Marihuana Experience	Use Marihuana Now
No Days	45.4%	21.2%	49.6%	23.6%	44.5%	27.4%
1 - 3 Days	11.7%	21.2%	8.1%	26.4%	12.3%	26.9%
4 Days	6.1%	10.6%	2.6%	15.4%	6.2%	5.8%
5 - 10 Days	5.5%	20.7%	3.0%	9.1%	5.6%	15.9%
11 - 20 Days	4.3%	9.1%	0.3%	3.4%	2.8%	2.9%
21 or More Days	4.5%	6.7%	1.1%	3.8%	3.9%	3.8%
Not Sure / No Answer	22.5%	10.6%	35.3%	18.8%	24.8%	16.8%
	100%	100%	100%	100%	100%	100%

TABLE 52

Present Cigarette Use and Marihuana
Experience Among Adults and Youth, 1971

	<u>Total</u>	<u>Marihuana</u> <u>Never</u> <u>Used</u>	<u>Ever</u> <u>Used</u>	<u>Use</u> <u>Marihuana</u> <u>Now</u>
Adults (18 and older)	39.3%	38.1%	54.1%	57.2%
Youth (12-17 years)	14.9%	8.5%	53.3%	68.0%*

(How to read table. For example: 39.3% of all adults presently smoke cigarettes, 57.2% of those who presently use marihuana smoke cigarettes.)

*Although the percentage base is small (N=51) which might indicate possible unreliability of the data in the figure, 68.0% is comparable to that found by numerous researchers studying populations of similar age.

found that among *all* adults surveyed, 70.9% have smoked cigarettes, 39.3% smoke now and 25.4% have never smoked cigarettes. Among those who *have ever smoked marihuana*, 86.9% have smoked cigarettes and among those who *presently use marihuana*, 57.2% *now* smoke cigarettes, and 85.6% *have* smoked cigarettes at one time or another.

Among those adults who *presently use* marihuana, 46.1% smoked between a half and one and one-half packages of cigarettes a day as compared with 40.1% of those who *ever used* and 31.1% of all adults who smoked a similar amount. The data point to a larger percentage of marihuana smokers consuming cigarettes at a moderate to high level than among adults in the general population who also smoke cigarettes (Abelson, et al., 1972).

Abelson and his colleagues found that for adults as well as youth significantly higher percentages of those who *have used* marihuana and those who *use now* smoke cigarettes than do those who never used marihuana.

The conclusion that young people who drink alcoholic beverages and smoke cigarettes are more

likely to try and use illegal, dangerous drugs is inescapable. Again, no causality can be ascribed at this point. But the statistical correlation is overwhelming and abundant.

It should be noted that depending on the laws of the state, the sale of alcohol and cigarettes to a minor is, in fact, illegal; that is, young people are at least theoretically precluded from purchasing these drug substances given the fact that distribution is outlawed to all those below a certain age—typically 18, sometimes 19, 20 or 21. Therefore, in a strictly legal sense, alcohol and cigarettes are not entirely qualitatively different for the adolescent from drugs which are illegal for the entire population.⁶ In addition, if we were to examine the record of “objective” damage to heavy users, by any conceivable criteria, alcohol and cigarettes would have to be labelled “dangerous” drugs. Thus, the line between the substances popularly thought of as dangerous drugs, and those which are thought

⁶ For example, the purchase of cigarettes or alcohol by an underage person can be used to sustain a delinquency petition.

of as "ordinary," everyday substances, is far from sharp. In fact, the similarities would appear to outweigh the differences. It should come as no surprise that alcohol and cigarettes "lead to" the use of illegal drugs such as marihuana, LSD, methamphetamine and heroin.

RELIGION AND RELIGIOUS PARTICIPATION

How does the religion of one's parents fit in with marihuana use? Another consistent finding uncovered in nearly all studies is that Jews are significantly more likely to try and use marihuana than is true of non-Jews. Part of this difference is attributable to their urban residence. Jews are highly urban people, on the average, and it is in the cities and suburbs where marihuana use occurs with the greatest frequency. Secondly, the social class standing and education of Jews are significantly higher than for the national average—and these factors are highly associated with marihuana use. However, this alone cannot completely explain the differences observed.

In the same community, and at the same social and educational class level, Jewish youths are more likely to "turn on" than are non-Jewish youths. In the 1968 Narcotic Addiction Control Commission study, Jews were about twice as likely to personally know someone who used marihuana than were non-Jews; the figures were 12% for Protestants, 15% for Catholics and 22% for Jews (Glaser and Snow, 1969). Goode conducted a survey of a college class in 1970 at a state university; a significantly *lower* proportion of the Jewish students had not tried marihuana—22% vs. 38%.

In 1970, a study was made of all students who were listed in Merit Publishing Company's "who's who" of high school students across the country (Merit Publishing Company, 1970). This is not, of course, a random or representative sample of all American high school students, but it does form a certain segment of it. Religious background was strikingly related to marihuana use, to attitudes toward marihuana, its use, and its legalization. In answer to the question, "Do you use marihuana now?", 6% of the Protestants, 9% of the Catholics, but 22% of the Jewish students, said yes. Fifteen percent of the Protestants, 21% of the Catholics and 36% of the Jews said that they would use marihuana if it were legalized.

When asked, "Do you approve of marihuana use among high school students?", over a third of the Jews said yes (37%), but this was true of only one-fifth of the Catholics and Protestants (21%). A third of the Protestants (31%), and a fifth of

the Catholics (20%) said that they would feel a responsibility to turn in friends who used drugs to the "proper authorities," but only 8% of the Jewish students said that they would do so. Seventy-eight percent of the Jews said that the penalties for marihuana use and possession were too severe, but only 46% of the Protestants and 57% of the Catholics said this.

Again, the factor of residence and class background also add to the relationship, but there is no question that attitudes toward marihuana, as well as its use, are strongly related to religious background. Jewish youths today are a high "at risk" group for trying and using marihuana. The factor of religious background makes a great deal of difference in whether or not any given young person turns on to the use of marihuana.

In the well-known "Kinsey Reports," (Gebhard, et al., 1967), the most impressive and consistent statistical correlations were found between sexual traditionalism and religious orthodoxy; this was particularly the case among women. We would expect the same relationship to hold up between religious traditionalism and the non-use of drugs. Our expectations are confirmed. Anyone who adheres to a formal traditional religious practice stands a considerably lower likelihood of trying or using marihuana—or any illegal drugs. People who are estranged from organized religion stand a far higher chance of "turning on." Religion is not an absolute shield against becoming involved in illegal drugs, but in a statistical sense, the religious are unlikely to be attracted to drugs. Again, the causal link is not certain, although the descriptive generalizations cannot be doubted.

In the study by Bruce Johnson (1972) of drug use on several campuses in and around New York City, this relationship between religiousness and religious observance and marihuana use was explored. Of those college students in the sample who said that they never attended church at the present time, about one-fourth (26%) were abstainers from marihuana—they had never "turned on." The more that the respondent attended religious services, the higher this figure went, until among weekly or more church attenders, three-quarters (77%) said that they had never tried marihuana. At the other end of the marihuana spectrum, about one-third of the "never" church attenders (or 31%) were weekly or more marihuana smokers, but only 4% of the weekly church attenders were weekly or more marihuana users.

A number of other studies have also pointed to differences in marihuana use between persons of different religious faiths and the degree to which the individual is or feels involved in his religion.

For example, the survey conducted by *Playboy* (1970) of students on 200 college campuses pointed to the fact that a higher percentage of Jewish students used marihuana than did those who were

Protestant or Catholic. Those who listed None for religious affiliation were second in order to the Jewish students as occasional users, and highest of all among the frequent users (*Playboy*, 1970).

TABLE 53

Marihuana Use and Religious Preference
Among Students on 200 College Campuses
(N = 7,300)

<u>Religion</u>	<u>Marihuana Use</u>		
	<u>Never</u>	<u>Occasional</u>	<u>Frequent</u>
Protestant	63%	29%	8%
Catholic	57%	35%	8%
Jewish	32%	44%	24%
Other	53%	32%	15%
None	26%	42%	32%

In another study conducted at Carnegie-Mellon University in 1968, a pattern similar to that of the *Playboy* study was found. Among the *Freshmen Marihuana Tasters* (those who used one time and used no other illegal drugs), Jewish youth rank last; those having no religious affiliation ranked first. Among the *Freshmen Marihuana Users* (used marihuana 2-10 times but used no other illegal drugs) Jewish youth were also significantly higher. A similar pattern was found among the

Taster and *User* groups of upperclassmen. It should be noted that among the upperclassmen, those listing no religious identification constituted the highest percentage for both the *Taster* and *User* groups. Among the freshmen, those with no affiliation had the highest percentage in the *Taster* group and were not significantly different from the Jewish youth who had the highest percentage in the *User* category (Goldstein, et al., 1970).

TABLE 54

Marihuana Use and Religious Preference Among
Carnegie-Mellon University Students

<u>Religious Preference</u> <u>(religion reared)</u>	<u>Freshmen</u>		<u>Upperclassmen</u>	
	<u>Tasters</u>	<u>Users</u>	<u>Tasters</u>	<u>Users</u>
Protestant	19%	15%	18%	16%
Catholic	15%	8%	10%	8%
Jewish	4%	38%	12%	21%
Other	-	4%	12%	6%
None	62%	35%	46%	47%

Findings along similar lines have resulted from several other studies, including the 1970 CBS Telephone Poll of 1,128 adults 18 years and older. In this study the non-affiliated and *other* group constituted the highest percentage in both the

wants to try and the *has tried it* categories (CBS, 1970).

A nationwide survey of 38 college campuses involving 5,050 students, found the incidence of marihuana use to be divided among the various

TABLE 55

Marihuana Use and Religious Preference
Among Adults in the General Population

<u>Religious Preference</u>	<u>Marihuana Experience</u>		
	<u>Has Not and</u> <u>Does Not Wish to</u>	<u>Wants to</u> <u>try it</u>	<u>has tried</u> <u>marihuana</u>
Protestant	89%	6%	5%
Catholic	87%	6%	8%
Jewish	78%	10%	13%
Other/None	75%	13%	13%

religious preferences much the same as other researchers have reported. Reporting on students *who ever used* marihuana, the study found that 68.6% of those reporting no religious affiliation had smoked marihuana; 62.1% of Jewish youth in the survey indicated they had tried the drug. Twenty-eight percent of Catholic students and 23.7% of the Protestant students indicated trial of

the drug (Gergen, et al., 1971). A number of studies point to those with marihuana experience having generally little or no interest in religion, being without religious affiliation or differing from the religious affiliation of their parents (Blum, 1969a: Chapter III; Ewing, 1969; Manheimer, et al., 1969; Killinger, et al., 1970).

The Commission's National Survey found that

TABLE 56

Religion in Which Respondents Were Raised
And Marihuana Experience Among Adults
18 Years of Age and Older

<u>Religion</u>	<u>All Adults</u>	<u>Marihuana Experience</u>		
		<u>Yes</u>	<u>No</u>	<u>Use Now</u>
Catholic	25.5%	34.9%	23.9%	39.4%
Jewish	3.3%	6.3%	2.6%	7.2%
Protestant	64.1%	49.9%	66.5%	42.8%
Other	3.4%	2.1%	3.7%	1.0%
None	3.2%	5.9%	2.9%	7.7%
No Answer	0.5%	1.0%	0.4%	1.0%
	100%	100%	100%	100%
Weighted Base				
N =	4,540	700	3,208	208

TABLE 57

Self-Appraisal of Religious Involvement and
Marihuana Experience Among Adults
18 Years of Age and Older

	<u>All Adults</u>	<u>Marihuana Experience</u>		
		<u>Yes</u>	<u>No</u>	<u>Use Now</u>
Deeply Religious	26.0%	18.6%	26.6%	10.1%
Fairly Religious	57.6%	54.1%	59.1%	47.6%
Not Very Religious	13.8%	23.9%	11.9%	36.1%
Not Sure or No Answer	2.7%	3.3%	2.3%	6.3%
	100%	100%	100%	100%
Weighted Base N=	4,540	700	3,208	208

29% of Jewish adults (18 years of age and older) have had experience with marihuana and that 10% presently use the drug. Twenty-one percent of Catholics have tried marihuana and 7% continue to use. Among Protestants, 12% have tried and 3% continue to use. Among adults who are *presently using marihuana*, 43% are Protestant, 40% are Catholic and 7% are Jewish. Those classified as *other* comprised 1% and 9% listed *none* or failed to respond (Abelson, et al., 1972).

What needs to be understood when considering data on marihuana use and religious affiliation is that although it often appears as if a substantial proportion of those who have used marihuana are self-professed non-believers or non-affiliates of any religious group, the majority of persons who use marihuana are reasonably conventional in terms of affiliation with one of the major religious groups. Table 56 indicates the religion in which respondents to the Commission's National Survey were raised. It is interesting to note in Table 57 that among these same respondents the differences are not very great on the self rating scale of religiosity: deeply religious, fairly religious, not very or not sure/no answer.

When asked about attendance at religious services, these respondents, as noted on Table 58, showed dramatic differences only at the extreme positions of the continuum. Thus, for example, there was a considerable difference in attendance among adults with and without marihuana experience on the question of *regular attendance*. Similar differences were present at the other extreme, namely, *no attendance at all*. The majority of persons, however, including those who never tried marihuana, those who have tried, those who presently use and the total adult population, were rather similar on the mid-range positions of *sometimes attend services* and *attend services once in a while*.

Affiliation or identification with a religious group, however, should not be equated with regular participation in the practice of that religion. While it is true for example, that persons with no religious affiliation may be more likely to have tried marihuana than individuals with a religious affiliation, the former group does not constitute a numerically significant total of the marihuana users.

TABLE 58

**Attendance at Religious Services and Marihuana
Experience Among Adults 18 Years and Older, 1971**

	<u>All Adults</u>	<u>Marihuana Experience</u>		
		<u>Yes</u>	<u>No</u>	<u>Use Now</u>
Regularly	38.6%	24.9%	41.0%	7.7%
Sometimes	17.1%	14.9%	18.0%	14.4%
Once in a While	23.6%	26.3%	23.3%	28.8%
Not At All	19.1%	31.9%	16.2%	45.7%
No Answer	1.6%	1.9%	1.5%	2.9%
	100%	100%	100%	100%
Weighted Base N=	4,540	700	3,208	208

SOCIAL RELATIONSHIPS

Almost no one tries or uses marihuana without having marihuana using friends. The most common reason for trying and using marihuana, aside from simple curiosity, is that one's friends use it, and provide the opportunity to try it.

The Commission's National Survey found marked differences among those experienced with marihuana and those without experience with reference to having friends who use marihuana at least once in a while (Abelson, et al., 1972).

The table illustrates the fact that persons who have used marihuana and those who use it now

TABLE 59

**The Relationship Between Marihuana Use and Having
Friends Who Use Marihuana Once in a While**

<u>Number of Friends</u>	<u>Total Adults</u>	<u>Marihuana Experience</u>		
		<u>Yes</u>	<u>No</u>	<u>Use Now</u>
More Than Half	5.1%	29.1%	0.7%	66.8%
About Half	1.7%	8.0%	0.6%	14.4%
Less Than Half	3.9%	12.0%	2.5%	10.1%
Almost None	8.9%	13.3%	8.9%	1.9%
None	46.4%	19.9%	54.6%	2.4%
Don't Know/No Answer	34.0%	18.0%	32.9%	4.3%
	100%	100%	100%	100%
Base (weighted)	4,540	700	3,208	208

have many more marihuana using friends than those who have never tried the drug or those in the total adult population. For those who presently use marihuana, the percentage who have close and ongoing social relationships with other marihuana users is in striking contrast to those who have never used the drug; 81.2% reported that from one-half to more than half of their friends used marihuana, contrasted with 1.3% of those who have never tried the drug. Among those who use marihuana now, 93.2% had some friends who used marihuana while 12.7% of those without marihuana experience reported having some friends who used the drug once in a while.

The Commission's National Survey also found that among adults who have tried marihuana, 51.4% were first introduced to marihuana experience by a friend they knew well; 13.0% indicated that an acquaintance first introduced them to the drug. For those who use marihuana now, 72.1% were first introduced by a close friend while 15.4% said that an acquaintance was involved in their initiation. Thus, 64.4% of those who *ever tried* and 87.5% of those who *use now* were first introduced to marihuana by a close friend or acquaintance (Abelson, et al., 1972).

The National Survey (Abelson, et al., 1972) shows a clear pattern of friendship association in the setting as well as the chosen company among those respondents who have marihuana experience. For those who *ever tried*, 58.9% reported first trial with a friend (21.0%) or with a small group of friends (37.9%). Among those who *use now*, 83.6% stated that initial experience was with a friend (57.2%) or with a small group of friends (26.4%). Initial use for those who *ever used* was in the home of a friend (33.3%) and for those who *use now* an even higher percentage (49.5%) reported initial use in a friend's home.

A number of studies have reported findings similar to those found by the Commission. The 1970 CBS Telephone survey of a national cross-section of American adults reported that among those who have used marihuana, 72% had friends who use marihuana, and 21% had friends who had tried it (CBS, 1970). The Louis Harris—*Life* Poll of 4,047 respondents found that among high school youth, 62% knew someone who had used marihuana and 83% of the college students were familiar with someone who had tried the drug (Harris, 1971).

The "peddler" does not appear to be a major factor in the marihuana use of any sizeable number of young people; this myth has become thoroughly discredited. Another myth is that the young person tries and uses drugs, including marihuana, because of loneliness, fear of being alone,

frightened of human contact. Marihuana users become users specifically because they have friends, because their friends use marihuana, and because they value the opinions of their friends. In a survey of several hundred "Yippies" at Chicago's Lincoln Park at the time of the 1968 Democratic National Convention, a group of researchers, who were physicians from Northwestern University's School of Medicine, found that by far the most common reason claimed for the respondents "starting on drugs"—nearly always marihuana—was that they were *turned on by friends*. To anyone not familiar with the drug initiation process, this might appear to be a *non sequitur*—why turn on merely because one's friends do so? But the fact is, the endorsement of a drug by a friend, as well as the presentation of the opportunity to try that drug, have a powerful impact on actually trying the drug (Zaks, et al., 1969). Although *curiosity* followed by desire for a *new experience* were the chief motivating factors for both the youth and adults, the memory of some sense of social pressure appears to be a part of the initial marihuana experience of young people. Social pressure which is so common in adolescence is referred to here in the sense of having slightly older and slightly more socially prestigious friends who use marihuana, and wishing to partake in an activity which these valued friends partake in. The term "social pressure" is misleading, since it implies that a young person is impelled toward an activity which he would otherwise, in the absence of this "pressure," find distasteful.

What is more likely is that friends tend to share activities, values, opinions, ideology, and as a young person makes friends who use drugs, or as his friends begin to use drugs, he will want to share that activity (among others) with them. The fact that any given young person is part of a social group which has begun to use drugs means that his attitudes and values are *already* to some degree favorable to drug use. This is by no means an absolute rule, but this is what happens in the vast bulk of the cases. As Bruce Johnson (1972) has shown, young people tend to adjust their drug use to that of their friends, rather than adjusting their friends to fit their own drug (or non-drug) use (Goode, 1971b).

A friend does at least three different things, serves three functions, in turning on a young drug-naïve individual. First of all, he is a living example; he provides a kind of legitimation for the drug. He demonstrates to the neophyte that a person whom he or she respects actually uses drugs, or uses marihuana. Part of the hesitancy most young people have in regard to illegal drug

use (which is still a minority phenomenon) is related to the fact that they do not know anyone who uses drugs whom they *respect*, with whom they have a personal face-to-face relationship—whom they trust, whose opinion they value. If the use of a drug, or, indeed, partaking in any activity, is associated in the young person's mind only with undesirable people, then he or she will generally avoid the activity.

A friend also can endorse the drug, define the nature of the drug experience, and explain what it is like to be "high." He will provide a rationale,

or a motive, for using a given drug. In a sense, he advertises the drug. And lastly, he provides the drug. Few drugs are so openly sold that a young non-user can, without trepidation, make a purchase in much the same way that he would buy a pair of shoelaces.

Even the knowledge of persons arrested for either selling or possessing marihuana is related to use patterns. The fact is that persons who do not use marihuana are less likely to have marihuana using friends and acquaintances and know of persons arrested on a marihuana charge.

TABLE 60

Marihuana Experience and Knowledge of Persons
Arrested for Selling or Possessing, By Region

	<u>Northeast</u>	<u>North Central</u>	<u>South</u>	<u>West</u>
Youth Who Tried Marihuana	16.5%	13.1%	6.8%	25.6%
Youth Who Know Some- one Arrested	40.1%	30.1%	27.8%	42.0%
Adults Who Tried Marihuana	19.8%	19.0%	4.8%	21.2%
Adults Who Knew Some- one Arrested	31.2%	21.5%	17.7%	35.3%

How to read table. For example: 16.5% of youth who had tried marihuana were in the Northeast, 40.1% of youth who knew of someone arrested were from the Northeast.

The table above illustrates the fact that youth as well as adults were more likely to know of someone arrested on a marihuana charge in the Northeast or the West followed by the North Central area and the South. It is precisely the same order in which the survey elicited distribution of marihuana experience for both the ever used and use now categories.

Most neophytes are somewhat dubious about drugs to begin with. They generally have to go through some kind of "conversion" experience—a process which friends are ideally suited to accomplish. They need the intermediary of a friend

to coax them along. The factor of the nature of one's friendships is absolutely crucial especially in the early stages of drug use. The subtle process of acquiring attitudes favorable to drug use, of having friends and acquaintances who define the drug experience in acceptable and pleasureable terms, of having an ideology which prepares one, or potentiates one, to accept the conversion process to begin with, all powerfully conspire to impel the young person in the direction of using drugs. These forces, *more than any others*, are causally involved in the process of "turning on." Young people are, in a sense, recruited (willingly), socialized, and

provided opportunities to try and use drugs—all by their companions.

A kind of two-way process begins to operate here. Having friends who use marihuana facilitates—indeed, causes—one's own use of the drug. But this, in turn, provides further opportunities for making more marihuana-using friends. What was the "cause" becomes the "effect," and vice versa. Drug use involves a gradual step-by-step absorption into a specific kind of social milieu—for which one was already, in a sense, prepared, even before one tried any drug. It is necessary to be somewhat like drug users to some extent, even before entering their ranks—that is, to be acceptable to be a convert. This is also the case for both alcohol and cigarette use.

A young person is almost never wholly or totally seduced or duped into marihuana use. It is a much more subtle process than this. The potential user's social characteristics, his attitudes and behavior, his ideology and general orientation toward life, already make him a candidate for being "turned on." But he must have the opportunity, he must be accepted by the drug-using group which will gradually absorb him. And the existence of, and interaction with, this social group, further changes him. In time, what was a neophyte becomes ready to turn others on.

SEXUAL BEHAVIOR

Sexual behavior and marihuana use—indeed, the use of all drugs—are very closely related among young adults. In Goode's survey of the patterns of drug use and sexual activity on one college campus (Goode, 1970), verification was made of the connection between these two forms of behavior. Regardless of how sexual activity was measured, and regardless of which drugs were asked about, the two variables correlated significantly and powerfully.

Drug users (at least on the college campus) *are more likely to engage in premarital sex*, to engage in it *earlier* in their lives, and to engage in it *more frequently* and with a *greater number of partners*, than is true of non-users of illegal drugs. *Two-thirds* of the respondents in Goode's study who had never smoked marihuana in their lives were also virginal; only 34% had ever engaged in premarital intercourse. But only 28% of the marihuana users and triers were virginal; 72% had experienced premarital sex. Further, the *more* that the student smoked marihuana, the *greater* was his likelihood of having sex before marriage; only 15% of the students who had smoked marihuana three times a week or more had never engaged in premarital sex. Goode's study reported a positive and linear

relationship between the amount of marihuana one smokes and engaging in sexual behavior.

If one were to pass a value judgment on their behavior, one could say that users of marihuana tend to be somewhat more sexually "permissive" than non-users. Goode's study found that drug use, including the use of marihuana, is associated with intercourse with a greater number of partners of the opposite sex. The findings also indicated that drug users were more likely to have intercourse *more often* than non-users, regardless of the total number of partners; twice as many drug users as non-users (34% vs. 15%) had been engaging in intercourse weekly or more in the past six months (Goode, 1969).

In the *Playboy* Survey of college students on 200 campuses, those who used marihuana often had sexual relations more often than those who never used marihuana. The study pointed to a marked increase in sexual activity among females who reported using marihuana often. Among the population of *never users*, the survey reported 28% of the males and 62% of the females were virginal as compared with 6% of the males and 14% of the females who *use marihuana often* (*Playboy*, 1970). No evidence exists at present to demonstrate any aphrodisiac properties in marihuana. What we can observe is that some individuals are more likely than others to experiment with certain forms of social behavior. Marihuana use is one of these behavior forms and sexual activity is another (Walters, et al., 1972).

The social relationships which are a part of everyday living influence considerably what kinds of persons and under what kinds of circumstances persons who use marihuana tend to be social experimenters and associate with others who are likeminded. It is not surprising, therefore, to find that persons who are users of marihuana in a social context, as most users are, engage in sexual intercourse frequently. However, only the uninformed would say that illegal drug use is the *cause* of sexual permissiveness. Not only is the drug user more likely to have sex before marriage, but also, *it is the sexually permissive who stand a higher chance of using drugs*. This relationship can be looked at in either direction. *Sexual precocity* is related to drug use; drug users (including marihuana users) tend to have sexual intercourse *earlier* in their lives than is true of non-users.

In Goode's study, *over half* of the students who had tried four or more drugs (or 54%) said that they had had intercourse by age 17 or younger—but only *a tenth* (9%) of the drug-abstemious had done so; drug users were over five times as likely to be sexually precocious. But the relationship could be looked at in the opposite direction as well. Of all

those students who had had intercourse by age 16, only a tiny minority (or 7%) had not tried any drugs at all; fully a third had tried four or more drugs (Goode, 1970).

But of all the students who were virginal, almost half (47%) had not tried any drugs, and only one in ten (10%) had tried four or more drugs. Which comes first, drug use or sexual permissiveness? Is drug use the "cause" of sexual permissiveness—or the reverse? Or is it even possible to draw a causal arrow? Young people do not engage in sexual behavior *because* they use marihuana or any other illegal drug. They do both because both are accompaniments of patterns of life which are more permissive in a wide range of ways. Both are part of larger subcultural developments which include a less restrictive and less traditional pattern of behavior regardless of the specific area in question. As a young person is initiated into drug use, into a drug-using subculture, his behavior undergoes subtle changes in a number of ways—in the direction of the subgroup he is being socialized into. As we shall see, there are other aspects to this subculture as well—a lack of interest in organized religion, liberal politics, and so on. But to say that any one element of this whole pattern "causes" any other would be to draw a simple-minded inference such as the assertion that marihuana use "causes" sexual "promiscuity" and "perversions." An awareness of the socio-cultural processes at work will insulate us from making such spectacular errors in fact and reasoning.

LIFE STYLE AND PERSONALITY FACTORS

Selecting a limited number of social and behavioral "correlates" of marihuana use is difficult, because many such features of one's life are related to drug use. However, the following correlates appear to be closely intertwined and associated with the use of marihuana among young people: cigarette smoking, drinking alcoholic beverages, sexual permissiveness, political ideology, and religious beliefs and practices. Personality factors, by themselves, do not seem to be of primary importance in the determination of whether or not an individual will use marihuana. They are, however, the mediating factors which influence the kind of life style and behavior patterns one will ultimately adopt.

Johnson (1972) also found that there was a remarkable concatenance of factors related to marihuana use. Most studies explore various factors which are separately related to marihuana use, as well as to drug use in general. However, several variables, taken together, can predict mari-

huana use even better than each one separately. With a few simple social factors, it is possible to predict marihuana use with a high degree of precision. The Johnson study selected four such potent "predictor" variables: (1) sex; (2) religiousness; (3) political liberalism; and (4) cigarette smoking. Using only these four factors, it was possible, with close to 100% accuracy, to predict who would use marihuana and who would not. The correlations were so powerful that it was not even necessary to inquire as to personality configurations, not necessary to posit an "escape from reality," not necessary to find out which students hated their parents and which did not, who was rebellious and who was not. All that was needed to know was which sex the respondent was, how religious he was, what his political orientation was, and whether he smoked cigarettes or not. Of all non-religious, politically liberal, daily cigarette smoking men, 97% had tried marihuana and 62% were weekly or more users of marihuana. Of all religious, politically conservative, non-smoking women, only 4% had even tried marihuana and not one single respondent was a weekly or more user of marihuana. Social life is enormously complicated, and the sociologist almost never finds statistical differences of anything like 100%; but in this case, we are comparing 97% in one group with 4% in another—the magnitude of which is rarely seen in social research.

This does not necessarily mean that personality factors are irrelevant. But it does mean that they are not absolutely necessary, as considerable predictive power grows out of exclusively sociological variables. (It could be that personality factors are underlying these social variables that have been selected; however, saying that young people who smoke cigarettes or who are politically liberal are distinctive is significantly different from saying that marihuana users are distinctive in regard to their personalities.) Marihuana use, in short, grows out of the life style and social behavior expected in certain groups and milieux in society.

The style of life of certain segments of society *almost implies* marihuana use. It is for some a taken for granted aspect of life. Anyone who is a part of certain social groups wherein marihuana use would be expected would be regarded as somewhat eccentric if he refused to smoke it, just as, say, a wearer of a beard would be in more traditional circles. This is, of course, the factor of social pressure operating here—as it does in all realms of life. Social pressure is as operative for those aspects of life that most of us will consider "good" as it is for those things which are more negatively valued for the cultural mainstream. There is social pressure to wear one's hair short

in some groups, and long in others. A drinker will feel peculiar among some social circles—and an abstainer will be made to feel the same in different circles. It is convenient to label as “insidious” social pressures we disapprove of, forgetting that the social pressures we approve of, urging others to do things we think ought to be done, operate in precisely the same manner.

It would be foolish to deny that personality factors play a role in marihuana use. (Although they probably play a much more potent role in the use of more dangerous drugs. The more widespread an activity is, and the more it becomes socially accepted within some groups, the less necessary it is to invoke personality differences to explain participation in that activity.) At the same time, it is necessary to register a few serious reservations concerning the over-generous application of what is called personality theory to the etiology of deviant behavior. First, much of what is grouped under the rubric of personality can be located, upon closer inspection, within the realm of the attitudes and values of large and common groups within society, rather than in the psyches of scattered individuals. More serious is the fact that often many personality variables are arbitrarily declared to be indicative of poor mental health and pathology, and turn out to be nothing more than a crystallization of one or another dominant group's ideology. Some very widespread (but somewhat unconventional, from the dominant culture's point of view) personality traits are declared to be “abnormal,” and the tests designed to measure them are sometimes wielded in an invidious manner. For instance, “irresponsibility” is meaningful only within a specific social and cultural system—which some may reject. “Maturity” and “immaturity” are meaningless in the abstract, and meaningful only in relation to something—usually that which the individual using the term thinks is a good thing. “Social adjustment” is an adjustment to something.

It has become standard in an enumeration of the motives or reasons why young people use marihuana that “rebellion” is a major causal factor. It is certain that some young people conform to this pattern. It is likely, however, that this explanation is too simple. An activity such as marihuana use could not be sustained without meaning to the participants which extends beyond a mere rejection of the notions of the dominant culture; the activity must strike a responsive chord in a wide range of ways. As Linn (1971) points out, “it is erroneous to assume that marihuana using young people engage in nothing other than deviant activities.” As with any participants of a certain activity condemned by much of society, (1) the

conventional tend to over-state that activity's role in the lives of those who are condemned as deviants, and (2) the participants in that activity must expend a large portion of their time, energy, emotion, identifications, in quite conventional activities and spheres.

The marihuana subculture is not merely deviant or indiscriminantly “rebellious.” It does vary to a degree from the “straight” concerns of the cultural mainstream. There are some deviant activities which marihuana users are more likely to be implicated and active in—such as premarital intercourse, political demonstrations, and, for a certain number, the use of dangerous drugs. But these activities are part of a whole cloth, part of related activities and concerns—some of which happen to be legal and approved. In a study of 700 undergraduates in 1968 at the University of Wisconsin at Milwaukee, Linn (1971) found that “mainstream” liberal politics typified marihuana users far more than non-users. An “introspective-psychological” identification, likewise, engaged users more than non-users—an “interest in psychology,” concern about “the meaning of life,” a tendency to worry about “what to do in life.” And a “cultural-intellectual” identification—liking foreign films, attending plays, concerts, or the ballet, attending art exhibits or lectures—was significantly more likely to be held among current users of marihuana than students with no contact with the drug. In other words, marihuana use is much more than a symbol of rebellion—and nothing more. It is woven into a certain life style today. Some of the elements of this life style happen to be disapproved of by conventional Americans. Other elements are perfectly acceptable to the cultural mainstream. These elements hang together as a kind of cultural whole, but they do not conform to the simple dichotomies society has constructed—they are to a degree independent of them. The rebellion theory cannot explain most of the social and behavioral features of marihuana use.

Is the personality of the marihuana user more “dependent” than his non-using peer? Or is it the non-user who is more rigid, less free? Richard Blum and his associates (1969a) found that drug users of all classes of drugs tended to rank high on a dimension of “seeking new experience.” To put it another way, of all individuals who value new experience, their likelihood of trying and using a wide range of drugs is far higher than is true of individuals who close themselves off to new experience, who place a low valuation on seeking new experience. Two sociologists, William Simon and John Gagnon (1971), in their extensive survey of a broad cross-section of American college students,

found a related phenomenon operating; authoritarianism—the rigid adherence to rules and the subservience to those in positions of power—was correlated in a negative direction with marihuana use. High authoritarians had a very low likelihood of ever using marihuana, while low authoritarians had a high likelihood. The differences were on the order of about five times—only 6% of the high authoritarian men had tried marihuana, but 28% of the lows had; the figures were 3% and 15% for women.

A study conducted by four psychologists, Hogan, Mankin, Conway, and Fox (1970), at two east coast universities, compared the attitudes, values and personalities of four groups: “frequent” marihuana users (who had smoked marihuana more than ten times), “occasional” users (10 times or fewer), non-users, and “principled” non-users (who had never used, and did not intend to use, marihuana). For nearly all of the personality traits explored, the frequent users and the principled non-users were at polar opposites—with the other two in-between, as expected, with non-users closer to principled non-users, and occasional users closer to frequent users. The authors found that the following traits were empirically associated with “frequent” marihuana use: hostility toward conventions and rules, impulsiveness, nonconformism, narcissism, “overconcern” with personal pleasure, social perceptiveness, sensitivity to the needs of others, social skillfulness, the possession of broadly-based interests, “irresponsibility,” and intellectual curiosity. The principled non-user, in direct contrast, tended to rank high on the following traits: “responsibility,” dutifulness, lacking in spontaneity and verve, authoritarian compliance, deferentialness to external authority, extreme self-control, and the possession of a narrow interest span.

Another psychologist conducted a study of the incoming university freshmen (Goldstein, et al., 1970). His findings corroborate those just summarized. He found that users of marihuana (as well as users of amphetamines and alcohol), in contrast to non-users, tend to: “score in the direction of greater poise but lower sense of well-being, are more non-conforming, more critical, more impulsive, more self-centered, less oriented toward achievement by conformity, more insecure, more pessimistic about their occupational future, more disorganized under stress, more flexible in thinking, more rebellious toward rules and conventions, more inclined toward aesthetic and social values and less toward economic, political and religious values . . .” (Goldstein, et al., 1970).

Non-users of marihuana, then, tend to be more conventional, more traditional, more authoritar-

ian, more oriented toward the adult generation, more “conservative.” They tend to be less critical of things as they are, more optimistic, and more accepting of the existing social order. They believe more firmly in the correctness of the prevailing morality. They are often less adventurous, less eager to stray beyond well-defined boundaries. They are more “dependent,” in the sense that they are comfortable with clear-cut guidelines, a black-and-white spelling out of right and wrong. They tend to be intolerant of shades of grey, of ambiguity. They tend to take orders well and like being part of a team. They have a faith and respect in existing power hierarchies and probably would make good “organization men.”

Marihuana users tend to be at the opposite end of these scales. They are less rigid in their thinking process, more flexible in their attitudes about what can and cannot be done. They are less traditional, less patriotic in the traditional sense, less religious, less conventional in a wide range of ways. They are more independent; they tend to be non-conformists. They tend to be dubious about the validity of power, order, authority, hierarchy. They tend to stand high in creativity, but lower than non-users in reliability. Their sense of morality is more relative, more “situational,” less absolute. They value freedom and risk-taking, explorations into the less-than-certain. They are more critical concerning the social order. And they are more critical about themselves; they have a stronger desire to change themselves and the way they are.

This characterization should bear with it the following qualifications: (1) our attitudes concerning these personality “types” should be independent of their existence—neither should be looked at in behavioral terms as “good” or “bad,” “healthy” or pathological, as these are purely value judgments; (2) these personality differences are only relative to one another—not all non-users are authoritarian, not all users value freedom—they are not absolutes, they are only comparisons; (3) there is no effort at this point to impute a causality here, although one is certainly operating to some degree—this is only a characterization, and not an explanation of the etiology of marihuana use; (4) it is highly likely that these differences apply only to this period of history, to this civilization; they are not universals, they do not extend beyond the specific locations of time and place.

The Patterns of Marihuana Use

Frequent references have already been made to large and sometimes irreconcilable differences in

terminology and operational definitions. Nowhere, however, are the variations greater and the data more resistant to accommodation than is the case of the patterns of marihuana use.

In large measure, this dilemma stems from the necessity of trying either to isolate or combine four separate and distinct issues: (a) the *frequency of use*, that is, the total number of times an individual has used the drug; (b) the *intensity of use*, that is, how often one uses marihuana within any given time period; (c) the *amount of use*, that is, how much marihuana was used (THC content, number of cigarettes, etc.) either totally, within a given time period or at any one sitting; and (d) the *duration of use*, that is, how long one has used the drug (the number of days, weeks, months or years between trial number one and either the present or the time use was terminated).

The data from most of the surveys reviewed are presented in terms of frequency only. Respondents were simply asked to designate the total number of times they had ever used the drug. In some cases, the various frequency categories were then assigned nominal references. Josephson and his colleagues (1971) for example, call "experimenters" those who reported using the drug less than nine times. "Occasional users" were defined as those who had used marihuana a total of 10 to 59 times. Those who reported using the drug a total of 60 times or more were referred to as "frequent" users (p. 45).

Similarly, Barter and his colleagues (1971) presented their data on marihuana use among some 26,000 college students in the Denver-Boulder (Colorado) area in terms of frequency only. Their terms of reference, however, are considerably different. "Experimental" users were defined as those whose marihuana use (or use of any of the other drugs inquired about) was limited to a maximum of two times. "Casual" users, similar to Josephson's "occasional" users, are those who have used one or more of the drugs a maximum of nine times. The definition of "moderate-heavy" users includes persons who have used one or more of the drugs inquired about and whose usage of at least one drug exceeded a total of nine occasions (p. 16).

In some cases an effort was made to combine frequency and intensity and the data were presented in terms of the total number of times used within the last 30 days, 12 months, or some other specified time period. In a study of Virginia high school students, for example (Ferguson and Howard, 1971), respondents were asked to indicate how many times they had used marihuana within the year preceding the survey. Again, the researchers

then arbitrarily assigned descriptive terms to the frequency-intensity categories. "Occasional" users were defined as those who had used the drug from one to a few times during the past year. "Frequent" users, the only other category, included those who reported using marihuana more than a few times during the 12 months preceding the survey (p. 24).

Other researchers have presented their data in terms of intensity, with no information being provided relative to frequency, duration or amount. Bruce Johnson (1972), for example, has designated as "experimenters" those who currently use the drug less than monthly. "Moderate" users are those who presently use the drug less than weekly, and "heavy users" were those reported to use the drug weekly or more often at the present time.

Likewise, the three surveys of college students conducted by Erich Goode contained data relative to the intensity of use. The five categories of use included: less than once per month, one to four times per month, one to two times per week, three to six times per week and every day. Those who used the drug less than once per week were designated as "infrequent" users; those who used marihuana at least three times per week were termed "frequent" users (1971:82).

One survey, conducted by the New York State Narcotic Addiction Control Commission (Chambers, 1971), combined both frequency and intensity. "Infrequent" users were defined as persons who used the drug within the six months prior to the survey but less than six times within the preceding 30 days. "Regular" users, on the other hand, constituted that group of individuals who used marihuana during the prior six month period and whose total use within the previous 30 days numbered six times or more (p. 8).

During 1969, Hochman and Brill (1971) attempted to determine the patterns of marihuana use among a sample of students at the University of California at Los Angeles. In this survey, data on the intensity of use were presented. The categories included: less than several times a month, several times a month, several times a week and every day. In addition, however, the researchers attempted to combine the data on frequency, intensity and duration in their nominal categories of "non-use," "occasional use" and "chronic use." Non-use was defined as use less than 10 times in the past year or more, and included those who never used marihuana and those who had experimented but terminated use. "Occasional use" was defined as total use from a minimum of 10 to 50 times in the past year, to a maximum of two times per week for up to three years. "Chronic use" constituted use, to the present, from three or more

times a week up to daily for two years or three or more times a week for three or more years.

Only one survey reviewed by the Commission separately presented data on duration and amount (Nisbet and Vakil, 1971). This survey, also conducted among UCLA students, showed the time interval (number of years) between the present age of the users and the age at which they first used marihuana (p. 24). These researchers were also the only ones to determine the quantity or amount of marihuana consumed on the last occasion the individual smoked marihuana (p. 26).

Although the terms of reference and the use or user categories in these and several other surveys are not strictly comparable, the definitions provided do permit the analyst to draw certain conclusions about whatever has been measured.

A fairly large number of surveys were found, however, in which the nominal or descriptive terms of reference remained totally undefined or where only one or two categories were specifically defined. In some instances, the referents indicate that the researchers have either inadvertently, or possibly deliberately, mixed frequency and intensity designations. The undefined categories of use in a 1969 University of Michigan survey (Francis and Patch, 1970), for example, included once, seldom, often (all three being frequency designations) and regularly (a term which implies intensity).

McKenzie's report (1970) on surveys conducted during three successive years at the University of Maryland provides two sets of categories. The first includes "once," "several times" (frequently designations) and "regularly"—a category of intensity and the only one defined (at least one time every two weeks). Throughout the report, however, the researcher also presents his data in terms of "experimental," "occasional" and "frequent" use, all of which seem to be synonymous for the previously named categories. Thus, once-experimental, several times-occasional and regularly-frequent.

Two other confounding factors deserve brief mention here. The first is the lack of uniformity in the frequency or intensity categories. The breaking points between frequency categories, for example, are rarely the same. The lowest frequency category is variously represented as once, one or two times or one to three times. At the other extreme, the highest frequency categories are variously expressed as two or more times, 20 or more times, 51 times or more, or over 100 times. Mid-ranges vary from four to 10 times, five to 49 times or other smaller or larger breakdowns in between.

The second difficulty concerns the data base. Some researchers calculate percentages on the basis

of the total sample size. In this case any one category is represented as some fraction of the total N and adding all frequency categories gives the percentage of the population who had ever used marihuana. In other cases, percentages are based on the total number of current users which, itself, is a fraction of the ever users. Where the base N's are not provided, calculations across rows or down columns must be made at the outset to determine what the base actually is. Those which add up to 100% are obviously based on the users only. Those which add up to the percentage of the population reported as having "ever used" are based on the entire sample.

In order to present the data from these many surveys in the clearest manner possible and to permit certain generalizations therefrom, the decision was made to group the surveys in terms of the manner of presentation.

The following several tables present the survey findings, grouped together as indicated in the individual table headings. Any nominal designations attached to specific categories of use are indicated in the columns entitled "designation."

Frequency

The available survey data on frequency of marihuana use suggest a positive correlation between the proportion who have ever used marihuana and the frequency of use—a finding which corroborates those of McGlothlin (1971) and Goode (1971b).

As the proportions of "ever users" in various populations (adults in the general population, college students, high school youth) increase, as they have done between 1967 and 1971, the percentages of marihuana users in the low frequency ranges have decreased. Where the percentage of ever users in the population has remained relatively low, the proportion of users in the low frequency categories has remained relatively high. In other words, the less common the practice of using marihuana, the greater and more prominent is rather low frequency experimentation with the drug. The higher the ever use figure goes, the larger the percentage of relatively frequent users.

Again reflecting the age distribution, early adolescents and adults beyond college age are significantly less likely than college students to be frequent users of marihuana. In large measure, this low rate of frequency among adolescents is a function of their youth. These young people have probably not used marihuana for a sufficiently long period of time to become frequent users.

TABLE 61
Survey Findings on the Frequency of Marijuana Use
(Specified Categories)

<u>References</u>	<u>Year</u>	<u>Region</u>	<u>Population</u>	<u>Percent Ever Used</u>	<u>Frequency</u>	<u>Percent of Sample* of Users**</u>	<u>Designation</u>
I. General Population							
Manheimer, et. al., 1969	1967	West	Adults, 18 years and over, N=1,164	13%	1-4 times 5-49 times 50 times or more	6 3 4	45 23 31
CBS, 1970	1970	National	Adults, 18 years and over, N=1,128	6%	Less than 20 times 20 times or more	5 1	85 15
Parry, et. al., 1971	1970-71	National	Adults, 18 to 74 years, N=2,552	5%	1-4 times 5-49 times 50 times or more	3 1 1	60 20 20
II. College Students							
Ewing, et. al., 1967	Early 1960's	South		30%	Less than 10 times 10-100 times More than 100 times	18.0 7.0 5.0	60 23 17
Eells, 1967	1967	West		13.7%	1-2 times	5.0 8.7	36.5 63.5

* Total= % ever used

** Total=100%

TABLE 61 (Cont'd)

Survey Findings on the Frequency of Marihuana Use
(Specified Categories)

<u>References</u>	<u>Year</u>	<u>Region</u>	<u>Population</u>	<u>Percent Ever Used</u>	<u>Frequency</u>	<u>Percent of Sample* of Users**</u>	<u>Designation</u>
King, 1967	1967	Northeast	Dartmouth gradu- ating seniors	22%	1-2 times 3-5 times 6-10 times 11-15 times 16-20 times 21-25 times 26-50 times 51 times or more	9.2 6.6 6.2	 Taster User
Goldstein, et. al., 1970	1968	Northeast	Carnegie-Mellon University Under- graduate and Gradu- ate students N=3,010	23.8%	Once 2-10 times 10-50 times More than 50 times	4.8 8.2 5.8 5.0	 Taster User
			Freshmen, Fall '68 N=507	18%	Once 2-10 times 10-50 times 50 times or more	5 6 4 3	 Taster User
			Freshmen, Spring '69, N=507		Once 2-10 times 10-50 times 50 times or more	4 7 9 7	 Taster User

* Total=% ever used

** Total=100%

TABLE 61 (Cont'd)
Survey Findings on the Frequency of Marijuana Use -
 (Specified Categories)

<u>Reference</u>	<u>Year</u>	<u>Region</u>	<u>Population</u>	<u>Percent Ever Used</u>	<u>Frequency</u>	<u>Percent of Sample*</u>	<u>Percent of Users**</u>	<u>Designation</u>
Morrison, 1969	1969	West	Sacramento State (California)	23.3%	1-3 times 4-10 times Over 10 times	8.2 4.1 11.0	35 18 47	
McCain, et. al., 1971	1969	Midwest	Small Midwest College, N=239	26 %	1-2 times 3-5 times 6-9 times 10-14 times 15-19 times 20 or more times		42 16 6 8 3 24	
O								
Barter, et. al., 1971	1969	West	Denver-Boulder (Colorado) N=26,111	26 %	1-2 times 3-9 times 10-29 times 30 or more times	9 6 4 7	35 23 16 27	Experimental Casual Moderate Heavy
Parry, et. al., 1971	1970-71	National	National (Ages 18-29)	26 %	1-4 times 5-49 times 50 or more times	11 8 7	42 30 28	Occasional Fairly heavy
III. <u>Junior and Senior High School Students</u>								
Haake, 1967	1967	Northwest	Mamaroneck, New York Junior High School (Grades 7-9)	5.6%	Once 2 or more times	2.5 3.1	45 55	
			Mamaroneck, New York Senior High School (Grades 10-12)	16.7%	Once 2 or more times	7.2 9.5	43 57	

* Total=% ever used

** Total=100%

TABLE 61 (Cont'd)

Survey Findings on the Frequency of Marijuana Use
(Specified Categories)

<u>Reference</u>	<u>Year</u>	<u>Region</u>	<u>Population</u>	<u>Percent Ever Used</u>	<u>Frequency</u>	<u>Percent of Sample* of Users**</u>	<u>Designation</u>
Governor's Citizen Advisory Committee, 1969	1969	West	Utah (Grades 8-12)	12.2%	Once	3.5	29
					2-5 times	3.3	28
					6-10 times	1.3	10
					More than 10 times	4.1	33
Hafen, 1971	1969	South	Maryland - Prince George's County (8th grade)	2%	1-2 times	67	
					3-10 times	28	
					11-50 times	5	
					More than 50 times	0	
Josephson, et. al., 1971	1970-71	National	Junior and Senior High Schools	15 %	1-9 times	9	Experimental
					10-59 times	3	Occasional
					60 or more times	20	Frequent

* Total=% ever used

** Total=100%

TABLE 62
Survey Findings on Intensity of Marihuana Use

<u>Reference</u>	<u>Year</u>	<u>Region</u>	<u>Population</u>	<u>Percent Ever Use</u>	<u>Intensity</u>	<u>Percent of Sample* of Users**</u>	<u>Designation</u>
I. <u>College Populations</u> Goode, 1972	1967	Northeast	A college in New York City		Less than once per month	22	Infrequent (less than once per week)
					1-4 times per month	18	
					1-2 times per week	27	
					3-6 times per week	21	Frequent (less than once per week)
					Everyday	13	
Hochman and Brill, 1971	1969	West	UCLA	52.2	Discontinued	21	
					Less than several times per month	32	
					Several times per month	29	
					Several times per week	14	
					Everyday	3	
Goode, 1972	1970	Northeast	State University at New York		Less than once per month	19	Infrequent (less than once per week)
					1-4 times per month	31	
					1-2 times per week	26	
					3-6 times per week	16	Frequent (at least 3 times per week)
					Everyday	9	

* Total=% ever used

** Total=100%

TABLE 62 (Cont'd)
Survey Findings on Intensity of Marihuana Use

<u>Reference</u>	<u>Year</u>	<u>Region</u>	<u>Population</u>	<u>Percent Ever Use</u>	<u>Intensity</u>	<u>Percent of Sample* of Users**</u>	<u>Designation</u>
Johnson, 1972	1970	Northeast	20 New York colleges, N=3, 741	55	Less than once per month Less than once per week At least once per week or more	37 67	Experimental
Shipley, 1971	1970-71	Northeast	Penn State, Ogontz Center	55.7	1 or 2 times Less than once per week Once per week or more	18 19.9 24.3 11.5	33 35 44 21
Goode, 1972	1971	Northeast	State University of New York		Less than once per month 1-4 times per month 1-2 times per week 3 times per week Daily	19 25 21 23 12	Infrequent (less than once per week) Frequent (at least 3 times per week)

* Total=% ever used

** Total=100%

TABLE 62 (Cont'd)
Survey Findings on Intensity of Marijuana Use

<u>Reference</u>	<u>Year</u>	<u>Region</u>	<u>Population</u>	<u>Ever Use</u>	<u>Intensity</u>	<u>Percent of Sample*</u>	<u>of Users**</u>	<u>Designation</u>
II. Junior and Senior High School Students Elseroad and Goodman, 1970	1969-70	South	Maryland, Montgomery County Junior high schools	2.1***	About monthly About weekly About daily	1.5 0.6 0.0	71 29 -	
			Senior high schools	11.4***	About monthly About weekly About daily	4.3 4.3 2.8	38 38 24	
	1970		Illinois - Greater Egypt Region High Schools	14	1-2 times 1-2 times per month 1 time per week Several times per week	6 4 2 2 2	43 29 14 14	

* Total=% ever used

** Total=100%

*** Current users

TABLE 63

Survey Findings on Frequency and Intensity of Marihuana Use
(Specified Categories)

<u>Reference</u>	<u>Year</u>	<u>Region</u>	<u>Population</u>	<u>Percent Ever Used</u>	<u>Frequency and Intensity</u>	<u>Percent of Sample* of Users**</u>	<u>Designation</u>
I. <u>General Population</u>							
Chambers, 1971	1970	Northeast	New York State general popula- tion 14 years and older	10.5	No use in past 6 months	3.0	28
					Less than 6 times within past 30 days	4.0	38
					6 or more times within the past 30 days	3.5	34
							Former users
							Infrequent
							Regular
II. <u>Junior and Senior High School Students</u>							
Ferguson and Howard, 1971	1970	South	Virginia High schools	12.2	None in past year	0.4	4
					Once in past year	3.1	25
					2-5 times in past year	3.4	28
					6-10 times in past year	1.4	11
					More than 10 times in past year	3.9	32
							Occasional (1-10 times in past year)
							Frequent (More than 10 times in past year)

* Total = % ever used

** Total = 100%

TABLE 64
Survey Findings on the Frequency and/or Intensity of Marijuana Use
(Unspecified Categories)

References	Year	Region	Population	Percent Ever Used	Frequency/ Intensity	Percent of Sample* of Users**	Designation
<u>College Populations</u>							
McKenzie, 1970	1967	South	University of Maryland	15.2%	Once Several times Frequently	5.9 5.9 3.0	Experimental Occasional Regular (at least once every two weeks)
Haagen, 1970	1968	Northeast	Wesleyan	59 %	Infrequent Frequent	36 23	61 39
McKenzie, 1970	1968	South	University of Maryland	23.8%	Once Several times	7.6 10.7 5.6	Experimental Occasional Regular (at least once every two weeks)
DeFleur and Garrett, 1970	1968	West	A land-grant university	16.5%	Tried once as experiment Used several times Used often but stopped Now use frequently	6.1 4.9 1.8 0.0	48 38 14 0

* Total=% ever used

** Total=100%

TABLE 64 (Cont'd)

Survey Findings on the Frequency and/or Intensity of Marihuana Use
(Unspecified Categories)

<u>Reference</u>	<u>Year</u>	<u>Region</u>	<u>Population</u>	<u>Percent Ever Used</u>	<u>Frequency/ Intensity</u>	<u>Percent of Sample* of Users**</u>	<u>Designation</u>
California Department of Health and Wel- fare, 1970	1968	West	San Mateo County Senior high schools (Grades 9-12) N=18, 774	32%***	1-9 times in past year	15	47
					10 or more times in past year	17	53
California Department of Health and Wel- fare, 1970	1969	West	San Mateo County Junior high schools (Grades 7-8) N=2, 234	17%***	1-9 times in past year	11	65
					10 or more times in past year	24	62
Cobb County, Georgia Board of Education, 1971	1970	South	Georgia, Cobb County-Marietta County Junior high schools	4. 2%	Once Occasionally Often	2. 6 0. 8 0. 8	62 19 19
					Once Occasionally Often	4. 5 3. 4 2. 8	42 32 26
			Senior high schools	10. 7%	Once Occasionally Often	3. 5 2. 1 1. 7	48. 0 29 23
					Once Occasionally Often		

*Total=% ever used

**Total=100%

***Use during past year

TABLE 64 (Cont'd)
Survey Findings on the Frequency and/or Intensity of Marihuana Use
 (Unspecified Categories)

<u>Reference</u>	<u>Year</u>	<u>Region</u>	<u>Population</u>	<u>Percent Ever Used</u>	<u>Frequency/ Intensity</u>	<u>Percent of Sample* of Users**</u>	<u>Designation</u>
McKenzie, 1970	1969	South	University of Maryland	35.8%	Once Several times Frequently	8.5 19.5 7.6	19.7 23.5 21.2 Experimental Occasional Regular (at least once every two weeks)
Francis and Patch, 1969	1969	Midwest	University of Michigan	44.0%	Once Seldom Often Regularly	7.3 21.4 9.9 5.4	17 49 22 12
Udell and Smith, 1969	1969	Midwest	University of Wisconsin	22.6%	1-2 times Infrequently Frequently	11.6 5.9 5.1	51 26 23
Becker Associates, 1970	1970	Northeast	5 colleges in Massachusetts	43.5***	Once in the last year A few times in the last year Occasionally during the last year Frequently during the last year	6.5 12.0 16.0 9.0	15 25 37 23
Playboy, 1970	1970	National	200 colleges N=7,300	47 %	Occasionally Frequently	34 13	72 28

* Total=% ever used.

** Total=100%

*** Use during past year

TABLE 64 (Cont'd)
Survey Findings on the Frequency and/or Intensity of Marijuana Use
 (Unspecified Categories)

<u>Reference</u>	<u>Year</u>	<u>Region</u>	<u>Population</u>	<u>Percent Ever Used</u>	<u>Frequency/ Intensity</u>	<u>Percent of Sample* of Users**</u>	<u>Designation</u>
California Department of Health and Wel- fare, 1970	1970	West	San Mateo County Junior high schools (Grades 7-8) N=9, 074	14. 3%***	1 or 2 times in past year	5. 8	41
					3-9 times in past year	3. 0	21
					10 or more times in past year	5. 5	38
					1-2 times in past year	7. 9	18
					3-9 times in past year	7. 9	18
					10-49 times in past year	10. 9	23
					50 or more times	16. 3	41
			Senior high schools (Grades 9-12) N=26, 074	42. 9%			

*Total=% ever used
 **Total=100%
 ***Use during past year

TABLE 65
Frequency, Intensity and Duration of Marihuana Use

<u>Reference</u>	<u>Year</u>	<u>Region</u>	<u>Population</u>	<u>Percent Ever Used</u>	<u>Frequency Intensity Duration</u>	<u>Percent of Sample of Users</u>
Hochman and Brill, 1971	1969	West	UCLA	52.2%	Experimented but stopped	65.6
					Less than 10 times in past year or more	
					Total use of from 10 to 50 times in past year up to maximum of 2 times per week for up to 3 years	26.0
					Use to present of from 3 times per week up to daily for 2 years or 3 times a week for 3 or more years	8.5

TABLE 66

Duration of Marihuana Use*

<u>Number of Years</u>	<u>Number of Students</u>	<u>Percent</u>
0	46	11
1	94	23
2	106	25
3	73	18
4	51	12
5	21	6
Over 5	26	6

* Time interval between present age and age of first use of marihuana reported by students at the University of California at Los Angeles, 1970 (Nisbet and Vakil, 1971).

The data also show that marihuana use occurs at all levels of frequency but that the frequent users in any population constitute no more than ten percent of the total population or more than one-third of all users. If all of the use had taken place in any one year, two-thirds of the users would not have used the drug as frequently as once a week for a one year period.

Intensity

These survey data indicate that about 75 to 85% of the high school youth and about 50% of the college youth use marihuana once a week or less, thereby providing further corroboration of the frequency data reported above. Less than 10% of the college students reported using marihuana as often as once per day. Again, the relatively low intensity of adolescent marihuana use suggests that use has not been of sufficient duration for regular patterns of use to have developed. As such, high school age marihuana users, in contrast to those of college age, are significantly more likely to be infrequent and episodic or irregular users.

No evidence exists to demonstrate a general

progression to more frequent and more regular use of marihuana. As Goode (1971b) has noted,

. . . it is extremely common for users either to *fluctuate* their use greatly, due to many accidental and external factors (such as vacations, friends, availability), or to stabilize use at a fairly low level—several times a month, or weekly or so. A progression to heavier and heavier marihuana use, culminating in daily use, particularly use which involves being high all of one's waking hours is extremely atypical. . . . All available studies of marihuana point to the same basic fact: casual and episodic use is the rule . . . the daily user probably constitutes about one user in 10 . . . the individual who is high all of his waking hours probably constitutes about one or two percent of all marihuana users (pp. 86-87; italics in the original).

Duration

Only two surveys exist to inform discussion about the duration of marihuana use (Hochman and Brill, 1971; Nisbet and Vakil, 1971): Both of these surveys involved UCLA students. One was conducted in 1969 and the other in 1970. These two surveys suggest that about two-thirds of the students have used marihuana for no more than three years.

TABLE 67

Quantity of Marihuana Consumed by UCLA Students
the Last Time They Used the Drug*

<u>Quantity Consumed</u>	<u>Number of Students</u>	<u>Percent</u>
Less than one joint	87	21
One joint	120	29
Two or three joints	162	39
More than three joints	44	11

*Nisbet and Vakil, 1971

The most recent attempt to determine the present intensity of marihuana use among a national cross-section of American youth and adults was made under the Commission's auspices by Abelson and his associates (1972).

All respondents were asked to complete a self-administered written questionnaire which included several items relevant to one's personal experience with marihuana. To assure complete confidentiality of the data, the completed forms were placed in an envelope and sealed by the respondent without the interviewer having seen them. Respondents were then encouraged to accompany the interviewer to the nearest mail box so that the forms could be posted immediately to the data processing center.⁷

The results of the survey regarding the intensity of marihuana use showed that one-half or more of both youth and adults who had tried marihuana either discontinued use or were currently using marihuana rather episodically—at a rate of once a month or less. The Commission designated this category of users as "experimenters." Twelve percent of the adults and 19% of the youth reported

currently using the drug from a minimum of two to three times per month to a maximum of once per week. These users were nominally designated as "intermittent users." Six percent of the adults and 5% of the youth were termed "moderate users;" they reported using marihuana from several times per week to once a day. The "heavy users," defined as using marihuana more than once a day, included 2% of the adults and 4% of the youth. A small but unknown percentage of the heavy users may be very heavy users who are intoxicated during most of their waking hours.

Analysis of the non-respondents (30% of the adults and 12% of the youth) indicated that the overwhelming majority were either experimenters or intermittent users. This conclusion was reached on the basis of their close approximation to non-users or infrequent users with respect to a number of social and demographic characteristics found to be significantly correlated with use of marihuana. In terms of age, most of the non-respondents were in the upper age categories (35 and over). Most users, and most frequent users, are concentrated in the 16 to 25 age category.

In terms of geographic location, another efficient predictor of use, non-respondents were disproportionately located in the North Central and Southern regions of the country where marihuana use is least prevalent and most infrequent. Fifty percent of the ever users in the North Central region, for example, compared with 7% of those living in the West, failed to respond, but only 5% of the ever users in the North Central region compared with 21% of those living in the West currently use marihuana more than once a week.

⁷ One of the inevitable risks of this survey method is the possibility that some respondents will fail to answer one or more of the questions. In this case, 30% of the adults and 12% of the youth failed to respond to the question: "On the average, about how often do you use marihuana at the present time?"

In its concern about the relatively high no response rate, particularly that of the adults, the Commission directed the contractor to conduct a detailed comparative analysis of the non-respondents relative to all respondents and those individuals who never use marihuana. The results of this analysis are discussed below.

TABLE 68

Intensity of Marihuana Use Among
American Youth and Adults

<u>Intensity</u>	<u>% of Youth</u>	<u>% of Adults</u>	<u>Designation</u>
No longer use	45%	41%	Experimenters
Use once a month or less	15%	9%	
Use 2-3 times per month	10%	8%	Intermittent Users
Use once per week	9%	4%	
Use several times per week	5%	4%	Moderate Users
Use once a day	1%	1%	
Use more than once daily	4%	2%	Heavy Users
No answer	30%	12%	Probably experiment

Likewise, less than 0.5% of the North Central ever users but 4% of ever users in the West currently use marihuana more than once a day.

Other comparisons on the basis of sex, religion, political orientation, community type and other significant variables yielded similar results. The Commission, therefore, places considerable confidence in its conclusion that the overwhelming majority of these non-respondents were either experimenters or intermittent users of marihuana. This being the case, the Commission now estimates that approximately three of every four persons who use or have used marihuana can be characterized as infrequent or experimental users.

Table 68 presents the results of the survey regarding the intensity of marihuana use in American society as of August, 1971.

These figures provide strong corroboration of the earlier survey finding that on the average between 75 and 85% of high school youth use marihuana once a week or less. The National Survey data, excluding youthful non-respondents, yielded a figure of 79%. These data also provide support for the earlier finding that early adolescents (12-14) and adults beyond college age (over 25) are significantly less likely than young adults of college age (18-25) to be relatively regular users of marihuana (more than once a week). Lastly, the early survey data suggested that less than 10% of the college students use marihuana once a day or more. The Commission's National Survey has shown that only 3% of those 18 to 25 years of age currently use marihuana with this degree of regularity—the same figure presented by Hochman and Brill (1971) in their 1969 survey of UCLA students.

In short, marihuana use, for the overwhelming

majority of both youth and adults, seems to be a fairly infrequent and intermittent occurrence.

With respect to duration of use, the survey findings show that most continuing users in this country have used the drug over a relatively short period of time. Generally they began using marihuana either their last year of high school or shortly after they entered college and most terminated use before they completed their undergraduate or graduate studies. The average range of duration, therefore, is probably between 2 and 6 years. Very few Americans can be considered very long term users, that is, continuing use for over 10 years.

Amount

The Commission's National Survey did not address the amount of marihuana use. For this, we relied on a controlled laboratory experiment in which the smoking patterns of intermittent and moderate users (in the Commission's terms) were studied over one month in a supervised free access setting. The results of that study are presented in detail elsewhere in this report.

In summary, the use of marihuana in American society today seems to be an infrequent, episodic social or recreational activity of relatively short duration concentrated among relatively affluent, young adult, well educated, urban dwellers on the East and West Coasts.

Marihuana Use and the User: 1972

In an attempt to identify patterns of marihuana use in terms of frequency, intensity and duration and to discern the attitudinal and behavioral cor-

relates of use, the Commission has reviewed numerous surveys conducted in recent years. Due to large differences in the populations addressed, the survey and sampling methods utilized and the terminology and operational definitions employed, no precise comparisons have been possible. A careful sorting and analysis of the research, however, indicates the existence of patterns and regularities along several dimensions.

Because of the apparent inconsistencies in the findings that might be obtained from a survey-by-survey approach, the Commission staff undertook an aggregate analysis of three classes of research materials: those of the general population, those of college students and finally, those concerned with junior and senior high school students. Emphasis was placed on the gross similarities in the findings according to a selected set of variables shown repeatedly to be significantly correlated with marihuana use, regardless of the variations in sampling procedures, survey techniques, response rate and sample size. Despite the comparative and analytical problems, however, these surveys, in the aggregate, have provided valuable descriptive data about the differential use of marihuana in American society and those who use or have used marihuana.

The surveys, taken together, demonstrate significant overall increases, since about 1965, in the proportion of Americans who have tried marihuana at least once and those who currently use the drug. They also show, however, that substantial proportions of individuals who try the drug on one or more occasions discontinue use and that the overwhelming majority of those who have *never* tried marihuana are unlikely to experiment with it in the future, even if it were to become legal and more readily available.

The most current estimate of the number of Americans who have ever used marihuana has been obtained from the results of the Commission's National Survey conducted during August of 1971. The findings show that 14% of the youth (12 to 17 years of age) and 15% of the adults (18 years and over) in the national sample reported they had tried marihuana at least once. Projecting from this nationally representative sample to the total U.S. resident population in 1970, we now estimate that 3,360,000 youth and 20,700,000 adults or a total of roughly 24 million Americans have tried (ever used) marihuana. Present figures also indicate that the proportion of adults in the population who have used marihuana has increased by 300% or more between 1969 and 1971.

The Commission reviewed approximately 50 surveys of college and university populations (including both undergraduate and graduate stu-

dents) conducted between 1965 and 1971. The findings reveal a significant increase during this period in the proportion of college students reported to have tried marihuana at least once.

The Commission's National Survey estimated that 44% of American college students had ever used marihuana. The most current estimate of "ever use" of marihuana by college students obtained from the American Institute of Public Opinion (1972), suggests that while the incidence of use among college students continues to increase, the rate of increase may be slowing somewhat from that of previous years.

The Commission has likewise reviewed approximately thirty surveys of junior and senior high school students. With respect to junior high school students, although the number of surveys is too small to permit valid generalization, the rate of increase in the proportion of youngsters approximately 12 to 14 years of age who have used marihuana seems to have remained relatively stable between 1967 and 1971. Twenty-four surveys of senior high school students (grades 9 or 10 through 12) have indicated a 1% rise between 1967 and 1971.

We may tentatively conclude, therefore, that the proportion of individuals who have tried marihuana has increased since 1965 but that by far the greatest increase has occurred among college students.

The surveys clearly demonstrate that the incidence of marihuana use is age related. Persons who have used marihuana are concentrated primarily among young adults of college age (approximately 18 to 25).

Junior high school students appear to be about half as likely as senior high school students to have tried marihuana and senior high school students seem to be about half as likely as college students to have ever used the drug. The proportion of adults beyond age 25 who have used marihuana seems to mirror, on the downswing, the upward slope of "ever use" by those in the 12 to 17 year age category.

A thorough examination of the findings, however, suggests that age is not the only factor which is significantly correlated with marihuana use. The most significant determinant of marihuana use appears to be knowledge of or association with friends and age peers who have used the drug.

Unlike the broader term "ever used" which presumably means the same (lifetime use, have tried at least once) to all who use it and which has been used as the measure of incidence throughout most of the surveys reviewed, the referent to current or present use has differed considerably. Some researchers have simply differentiated non-users

(which does not always mean has never used) from users, but one is not sure whether all of the users are *currently* using marihuana. In most surveys, the outside limit of current use is use within the year (12 months) preceding the survey.

The findings of the surveys with respect to current use indicate that some fraction of those who have tried marihuana at least once continue to use the drug or, the obverse, that some proportion of the ever users have discontinued use. Among youth 12 to 17, which includes those who are junior or senior high school students, current users constitute 71% to 96% of those who have ever used. One would expect, however, that since initial use of the drug often occurs during this period, many of the current users are still experimenting with the drug. Because the experience is still new to many, one would expect to find few who terminate use at this stage.

Among the college students, current users represent between one-half to three-fourths of the ever users, therefore suggesting that marihuana use is concentrated within this young adult age group.

Among adults 18 or over in the general population, current users constitute one-third to about 40% of the ever users, again suggesting that use of marihuana drops off significantly after age 24 or 25.

The findings of recent national surveys bear out the fact that both ever use and current use are significantly correlated with age. In all age categories, students constitute a higher proportion of current users than non-students. Further, among the students, current users as a percentage of ever users continue to climb from age 18 to 29 (from 44 to 64%). For non-students, however, the sharp decline in current usage begins in the 21-24 year age category. According to a recent national survey, current users constitute 53% of the ever users in the 18-20 year age group, 29% in the 21-24 age category, and 11% among those 25 to 29 years of age. These figures therefore suggest that marihuana use may be expected to diminish significantly once the individual leaves the college or graduate school environment.

As already indicated, not all who have used marihuana continue to do so. The attrition rate seems to vary according to age and student status. Once again, however, variations in terminology preclude any exact estimate of just how many persons terminate use or when it is that use is discontinued. In the aggregate, however, it appears that at least 40% (a conservative estimate) experiment with the drug a few times and then terminate its use.

In the Commission's National Survey, which

specifically inquired about termination of use, six percent of both youth and adults reported that they no longer used marihuana—an attrition rate among the ever users of 46% and 41% respectively. Among those in the 18-25 year age group, 40% of the ever users said they no longer use the drug.

Regardless of the point at which they begin using marihuana, however, most of the ever users terminate the practice of smoking marihuana by the time they reach mature adulthood.

Is our society likely to witness further increases in the proportions of individuals who use the drug? Or can we expect the passing of a fad or fashion? Are those who have never used the drug likely to try it in the future? And if so, under what circumstances would this be likely to happen?

The surveys reviewed by the Commission staff repeatedly show that the overwhelming majority of individuals who have never used marihuana report that they do not expect to or definitely will not use the drug in the future. These studies also show that even among the users, that is, those who have not already terminated use, a fairly substantial proportion report reasonably firm expectations of decreasing or discontinuing use in the future.

The Commission's National Survey has found that 65% of all adults and 81% of adults who have never tried marihuana reported that they "would not try it under any circumstances." Likewise, 61% of all youth and 72% of those who have never tried marihuana also said they would not try it under any circumstances. Commission data show that among the present 12-13 age group, approximately 12% might be expected to try marihuana at some time. This figure is not significantly different from the proportion of junior high school students who have used marihuana at the present time. Approximately one-third of the high school age youth (14 to 17) also might be expected to use marihuana in the future. Therefore, we may expect an increase in use among this group as they reach college age. The increase, however, is not as large as that experienced among college age youth in the past several years.

Among young adults now of college age who have never tried marihuana, about one-fourth may be expected to do so at some time in the future; this is approximately the same figure shown for the 26-30 age group who have already tried marihuana. Lastly, among the non-users who are now 26 years and over, about 18% may try marihuana in the future—and a figure twice as large as the present ever users in that age category (9%).

These figures indicate that the greatest increases

in use among those who have not yet tried marihuana will probably be among young adults of college age and those over 25 years of age. With respect to the former, however, this increase may be of a considerably smaller magnitude than that witnessed within this age group in recent years. The data give no indication that the proportion of early adolescents who might try marihuana can be expected to increase in any significant manner in the future. The data on future use suggest that American society will not witness the significant increase in the use of marihuana in the future that it has in the past several years. Instead, the data suggest that we may have reached or be nearing a plateau and that in time what may be the fashion of the present generation may cease to be so in the future.

Present data indicate that most people try marihuana, at least initially, because they think that marihuana will satisfy their desire for excitement, "kicks" or pleasure. Particularly among young people, however, a substantial percentage of respondents also chose responses which relate to their need for social approval, enhanced sociability, a better understanding of their friends and a shared experience among significant others.

The reasons which relate to one's social experience were generally found to outweigh the use of marihuana in anticipation of overcoming personal problems such as anxiety, depression, tension or stress.

In summary, marihuana use is, from its very beginning, an experience which is generally perceived as an exciting and pleasurable social activity to be shared and enjoyed among one's peers.

Despite the fact that marihuana use has increased substantially since the mid 1960's, most Americans have never tried the drug. Data from the Commission's National Survey show that 80% of the youth and 71% of all adults had never used marihuana.

A relatively small proportion of those who have tried marihuana continue to use it. Various surveys have shown that most of those who have tried it discontinue use at some point, usually after their first or first few trials. The Commission's National Survey found that 61% of the adults who had experience with marihuana but no longer use it cited loss of interest as the reason given for terminating use.

The data indicate rather consistently that neither the lack of availability nor the cost were primary motivators in the decision to abstain from or discontinue marihuana use, but that loss of interest and concerns about effects played the most significant role in the decision to refrain from or to discontinue use.

The data also show that persons who never used marihuana are about twice as likely as those who terminated use to express fears of physiological and psychological damage. Among the youth, more than three times as many never users as former users were afraid of becoming addicted to marihuana.

With respect to the illegality of marihuana use, there was no significant difference between adult never users and former users in those citing illegality as the reason for abstaining from use but those who terminated were more than twice as likely as those who never tried marihuana to express fear of arrest or incarceration.

Present information concerning the correlates of marihuana use, coupled with the social and demographic characteristics of the user population, gives us a portrait remarkably different from that of the stereotyped marihuana "addict" of the 1920's and 1930's.

Much of the present day concern about the use of marihuana has related only in part to the drug itself. A substantial part of the public concern about this drug has really focused on the user. The reservoir of marihuana mythology which has persisted over the years coupled with the increasing use of marihuana among the young has no doubt colored the judgments, concerns and reactions of parents and public officials alike. Given these concerns and beliefs, it is no wonder that public policies have been harsh and punitive. To a substantial degree, the policies have reflected what the dangers of marihuana were *thought* to be. If, in fact, a substantial segment of the public felt that marihuana use could be lethal, that it was criminogenic and morally offensive and that its consumers were unlikely to lead normal lives, but likely to become indolent, criminal and addicted to heroin, what other courses were likely except those which reflected the maximum degree of public concern?

Many of these expressed concerns are related to two separate but not unrelated situations. First, the public indoctrination with the marihuana-dope fiend mythology of the 1920's and 1930's was reinforced during the 1950's when marihuana was linked to the use of heroin in a linear relationship. In short, the reasoning was that because most heroin addicts used marihuana, then one who uses marihuana will undoubtedly go on to using heroin. The problem of inner-city violent gangs and heroin addiction became the subject of numerous public hearings at the city, state and federal levels during the fifties, the result of which was the enactment of two major pieces of federal legislation, both of which equated marihuana use and sale with that of heroin.

The second aspect of this issue related to the enormous and visible spread of marihuana use during the latter part of the 1960's, a time when society was greatly concerned about crime, public safety and the problems of heroin addiction. The issue of marihuana use might not have assumed such great importance at that time had it not been for the fact that this new crop of marihuana users were mostly young, white, middle class, students from "good" families. Many of these youth became identified with and involved in a broad movement of social concerns often expressed through unorthodox, sometimes offensive means, not the least of which was confrontation with law enforcement authorities.

The Public, in its response to concern about marihuana use and marihuana users, however, failed to take into account *scientifically* validated findings concerning the true properties of marihuana; did not distinguish between the dangerous street criminal, often an addict, and the young person who used marihuana as a social facilitator; and expressed its frustration with the protests and antics of contemporary youthful life styles without distinguishing between social cause and social behavior.

For a time, the harsh penalties for possession and use of marihuana, frequently meted out across the country, served as a means, both actual as well as symbolic, by which the authority of (adult) society could assert itself over sometimes ungrateful and often unconventional youth. In short, (adult) society was going to have the last word. It was not long, however, before the picture in the puzzle began to emerge and society found itself with a rather serious dilemma: how to uphold the image of law and order without imprisoning tens of thousands of youth from the mainstream of middle and upper-middle class America. By the time society came to a realization and better understanding of the problem at hand, however, tens of thousands of youth, by virtue of their marihuana use, had been declared criminal and many were sent to prison. For these youth and for society as well, the future held all of the "promise" which accrues to the status of criminal and convict. Clearly, something had to be done to rectify what was rapidly becoming a major social, political and moral problem.

A first step in coming to grips with the dilemma centered around carefully documenting the chemical properties and effects of marihuana and determining who the marihuana user really is. What does he look like in social and behavioral terms? Why does he use this drug and with what kinds of people does he normally associate?

This chapter has attempted to present the most current information available about the marihuana user and his use of the drug. An in-depth discussion about marihuana, the drug, is presented elsewhere in this report.

The Commission found that the majority of persons who use marihuana can be characterized as *experimental* or *intermittent* users. These individuals can best be described as recreational users who utilize the drug for pleasure. For these individuals, the pleasure experienced in using the drug is framed within a casual behavior context; that is, marihuana use is integrated into the social-recreational requirements of the individual. This is in contrast to the drugs which produce compulsive behavior resulting from physiological dependence.

The Commission found that of those persons who have used marihuana, only 2% of the adults and 4% of the youth could be classified as *heavy* users, that is, they use the drug several times per day. A very small fraction of the heavy user group *may* be *very heavy users* who are intoxicated most of the time. It should be noted, however, that while the Commission did observe such usage patterns in certain foreign countries, no evidence was presented or obtained which indicates the presence of such usage patterns in this country.

In part, drug use among youth appears to be an outgrowth of the life style and attitudes of parents. Several researchers have demonstrated that a family environment often produces an atmosphere of toleration about drug use which is easily transmitted to youth. Young people whose parents use barbiturates, amphetamines, alcohol and cigarettes are more likely than those whose parents abstain from drug use to find mood or consciousness altering substances such as marihuana more acceptable. A general sense of liberalism and permissiveness on the part of parents is often related to the sense of increased permissiveness and liberal attitudes on the part of youth. This is especially relevant to the issue of choosing friends and the willingness to share the kinds of activities in which they engage.

Next to that of parents, the peer group exerts the most significant influence on the behavior of young people. The kinds of persons with whom one chooses to associate and interact is, in part, a function of the socializing experiences which individuals bring to a particular social situation. An individual who is eager for new experiences, who finds drug taking not unacceptable and who has friends sharing similar attitudes and values is more likely to find himself in social situations where marihuana (or some other drug) might be

tried. The Commission found that the influence of friends is of paramount importance in initiating marihuana use.

Data from the Commission's National Survey show that marihuana use is highest between the ages of 17 and 25. The use of marihuana falls off sharply after age 25 and continues to decline with increasing age. The National Survey data confirmed what other researchers have previously found regarding the relationship between using the drug and knowing persons who use it. The data show that as age increased after age 25, the number of individuals who used the drug or who knew someone else who used it steadily declined.

At the present time, marihuana use appears to be an age-specific phenomenon. Whether or not this situation will change in future years with the aging of the present group of marihuana using youth is a matter of conjecture and one that should interest researchers in years to come. For the present, however, we can conclude that marihuana is a practice largely confined to late adolescent and young adults.

The Commission found no evidence to indicate that race plays a substantial role in determining trial or continued use of marihuana. Among adults in the National Survey, 15% of white and 14% of black adults had tried the drug. The corresponding figures for present use of marihuana were 5% and 3%, respectively.

The Commission did find significant differences between the sexes among both youth and adult marihuana users. In all cases, males outnumbered the females in a ratio of about two to one.

The marihuana user is typically liberal in his or her political attitudes, and generally lives in or near a city or major metropolitan area or one of its suburbs. The user is also more likely to be from the Northeast or the West than from the North Central area or South.

One of the situational features relevant to using marihuana is educational status and educational achievement. College youths tend to use marihuana more than their non-college peers. Research points to the fact that college youth are more likely than high school youth to know someone who uses marihuana. There appears to be greater use of marihuana among students at the more highly selective colleges and universities where academic quality is high. The marihuana user is more likely than not to have more education than his non-marihuana using peers. This does not mean, however, that the more educated one is the more likely he is to use marihuana.

Simply stated, the demographic profile of the marihuana user shows that the likelihood of hav-

ing friends or acquaintances who use the drug, thereby increasing one's own chance of trying marihuana, is greater among the better educated, middle to upper middle socioeconomic class of students and young adults.

The marihuana using college student is not generally an academic failure nor does any valid evidence exist at this time to indicate that marihuana is a causative factor in academic failure. In contrast, a review of available research clearly points to alcohol use by high school and college youth as a correlate of poor academic achievement. More research is needed in this area, however, in order to better understand the roles which alcohol as well as marihuana play in academic achievement.

The data concerning the relationship between socioeconomic status and marihuana use indicate that children of better educated, more affluent parents with high prestige occupations have a greater likelihood of using marihuana than do children of less well educated parents with lower prestige occupations.

Present research points to a complex series of interrelated social, psychological and economic factors which strongly influence the likelihood of someone, particularly a student, trying marihuana. The educational and economic achievement of the parents plays a significant role in shaping their children's acceptability of marihuana as well as other drugs. The social, educational and economic status of one's peers also plays an important role in promoting or discouraging certain forms of behavior, including the use of marihuana and other drugs. Finally, present research points to the fact that the longer a young person remains in school, the greater is the likelihood that he will come to know persons who have tried or use marihuana and thus will have a greater opportunity to experiment with marihuana use himself.

Survey findings have generally shown that adolescents and young adults who drink alcoholic beverages and smoke cigarettes stand a higher statistical likelihood of using drugs, including both marihuana and heroin, than do their peers who neither drink nor smoke. Although many persons believe that those who use alcohol and those who use marihuana are vastly different, and that the drugs (alcohol and marihuana) are competitors, such is not the case. Young people who use illegal drugs, including marihuana, are fundamentally the same people socially and psychologically as those who use alcohol and cigarettes. They are simply somewhat further along the same dimension.

The Commission's National Survey found that

the frequency of alcohol consumption among adults and youth who have tried marihuana was significantly higher than for those who never tried the drug.

Present findings of the Commission show that marihuana users consume more cigarettes than either the general population or those who have never smoked marihuana. Further, the data show that among adults as well as youth, significantly higher percentages of those who *have used* marihuana and those who *use it now* smoke cigarettes than do those who never used marihuana or those in the total adult and youth population. The inescapable conclusion is that young people who drink alcoholic beverages and smoke cigarettes are more likely to try and use illegal drugs. While no causality can be ascribed at this point, the statistical correlation is significant and very high.

Religion and religious participation were found to play a significant role in the decision to use or abstain from the use of drugs. Persons who participate in a formal traditional religious practice stand a considerably lower likelihood of trying and using marihuana or any illegal drugs than those who do not. Persons who are either non-participating affiliates of a religious group or who claim no religious affiliation or participation stand a much higher chance of using marihuana as well as other drugs than those who are participants and affiliates. It should be understood, however, that religion is not an absolute shield against the use of illegal drugs. Although no causal link is certain, in a statistical sense the religious are less likely to be attracted to drugs.

The data from a number of studies point to the fact that those who have tried marihuana have little or no interest in religion, are without religious affiliation or differ in their religious affiliation from that of their parents. While a number of studies point to the fact that Jewish youth or those who are non-affiliated with any religion stand the highest chance of trying marihuana, there are numerous individuals who use marihuana and who are affiliated with and participate in religious affairs.

What must be understood when considering data on marihuana use and religious affiliation is that although a substantial number of those who have used marihuana are self-professed non-believers or non-affiliates of any religious group, the majority of persons who use marihuana are reasonably conventional in terms of affiliation with one of the major religious groups.

Although the data concerning religious participation, that is, attendance at services, showed considerable differences between those with marihuana

experience, including present users, and those without marihuana experience on the question of *regular* attendance at religious services, the adult National Survey respondents showed *very little difference* on the self-rating scale of religiosity: deeply religious, fairly religious and not very religious. While it is true that persons with no religious affiliation may be more likely to have tried marihuana than individuals with some religious affiliation, the non-affiliated groups do not constitute a numerically significant total of the marihuana users.

Most persons who have tried and now use marihuana have marihuana using friends. Although the most common reason for trying marihuana is curiosity, the data provide striking evidence that one tries marihuana aside from curiosity because one's friends use it and provide the opportunity to try it. Findings clearly illustrate the marked differences among those experienced with marihuana and those without marihuana experience in terms of having friends who use the drug. The Commission found that persons who have tried the drug as well as those who use it now have many more marihuana using friends than do those without marihuana experience.

The Commission's National Survey data point to a pattern of initiation to marihuana use in the course of normal social relationships. The respondents did not report seeking out or being sought out by criminal drug pushers. Most respondents did not report using the drug in the company of persons with whom they would not normally associate. The nefarious drug peddler or pusher does not appear to be a major factor in the initiation or use of marihuana by any sizeable number of young people.

The marihuana user, especially among college youth and young adults, is more likely to be sexually permissive than his non-marihuana using peers. A number of studies suggest that the drug using college student is more sexually active and has a higher frequency of pre-marital sex. Researchers have also observed that drug users tend to engage in sex earlier in their lives than non-drug users. There is no evidence at present, however, to show that marihuana contains any aphrodisiacal properties. Young people do not engage in sexual behavior *because* they use marihuana or any other illegal drug. They do both because both are accompaniments of patterns of life which are more permissive in a wide variety of ways. Both are part of larger subcultural developments which include a less restrictive and less traditional pattern of behavior, regardless of the specific area in question. One should not draw any inference with respect to causes; that is, to say that marihuana

somehow causes sexual permissiveness. Understanding the relationship between the use of marihuana and sexual behavior especially among youth requires an awareness of the complex socio-cultural processes which operate to modify the socio-normative framework within which behaviors take place. To ascribe complex human behavior to the infrequent consumption of a drug is to deny reality.

While personality factors undoubtedly play a role in marihuana use they probably play a much greater role in the use of the more dangerous drugs such as heroin. There are far too many instances in which a particularly offensive behavior, such as marihuana use, is ascribed to some form of mental illness or pathology. The more widespread an activity becomes and the more it becomes socially accepted within some groups, however, the less necessary it is to invoke personality differences within a mental health context to explain participation in that activity.

Much of the data concerning marihuana use relates more nearly to social rather than personality correlates to explain the process by which individuals experiment with or continue to use the drug. Marihuana use cannot be simply explained, as some would have it, by the "rebellion" thesis. Those who offer this explanation often postulate that individuals try and continue to use marihuana to express their rejection of the dominant cultural values. To accept such an explanation is to neglect the fact that marihuana using behavior could not be sustained without more positive rewards other than the sense of rebellion. The participants in marihuana use are, in most cases, sustained in their use of the drug in ways which have meaning for them, which bring them pleasure and satisfaction and which extend beyond the mere notion of committing a "deviant" act.

Researchers have found that drug users of all classes tended to rank high on a dimension of seeking new experience. Put in another way, of all persons who value new experience, their likelihood of trying and using a wide range of drugs is somewhat higher than is true of individuals who close themselves off to new experience or who place little importance in seeking new experiences. Characterizations of personality correlates among marihuana users and non-users should be viewed not as absolutes which are "good" or "bad", "healthy" or pathological, nor should attitudes toward the two personality "types," users and non-users, be translated into judgmental terms such as "good" or "bad", "healthy" or pathological. From a comparative standpoint, the personalities of marihuana users and non-users demonstrate some

differences; however, such differences which do exist are only relative to one another. Causal explanations of marihuana use should not be imputed from the personality differences identified. Rather, such personality differences as can be identified are likely to apply only to this point in time, and to this society.

As the marihuana user of today is significantly different from his counterpart of the 1920's and 30's, so the future marihuana user may differ significantly from today's user. In either case, the drug itself is not responsible for the change. Rather, the social, political, economic and moral climate of society will determine the incidence of marihuana use and the characteristics of those who use it.

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II. Marihuana and the Use of Other Drugs

The Commission was specifically mandated to study the relationship between marihuana and the use of other drugs. The National Survey, sponsored by the Commission (Abelson et al., 1972), showed that 70% of adults (18 and over) and 56% of youth (12-17-year-olds) believe that marihuana leads to stronger drugs. These beliefs, combined with the increase in marihuana use, particularly among students (from 5% in spring 1967 to 51% in fall 1971, according to a recent Gallup poll), have given rise to public concern.

The three sections of this chapter present collected and analyzed data pertaining to the Commission's study of the use of marihuana and other drugs.

The first section deals with a presentation of empirical data from a Commission-sponsored study conducted by Erich Goode on the escalation process. Included is the relationship between buying and selling marihuana and progressing to the use of other drugs, as well as a detailed discussion of several theoretical models of drug escalation causation.

The second section is a presentation of a survey sponsored by the Commission in the San Diego area. This study, conducted by Judd and Associates at the University of California, San Diego,

presents new empirical data on patterns of multiple drug usage among high school and college youth. These data further elucidate the role which the use of marihuana may play in the decision to try other drugs. The last section is a summary statement of the findings presented in this area.

*I. Empirical Data on the Escalation Process*¹

A nation-wide television program in September 1971 posed the question in a debate: "Marihuana is usually a stepping-stone to more dangerous drugs—fact or myth?" The commentator, after announcing that a poll had been taken of "experts," informed the audience that the statement was a fact.

The proposition that marihuana "leads to" the use of dangerous drugs, particularly heroin, has become a common-sense proposition, supposedly self-evidently true, and in need of no factual support—just as it was "true" 500 years ago that the world was flat. And yet, many assertions sound reasonable and plausible until a careful sifting

¹ Drawn substantially from a review by Erich Goode for the Commission.

of the evidence is undertaken. Apparent plausibility is insufficient for a sober demonstration or refutation. It is precisely the self-evidently "true" proposition which bears the most careful scrutiny.

Where, then, do the facts lead? Is marihuana an "escalation" drug? Is marihuana "usually a stepping-stone" to the use of more dangerous drugs? In order to answer this question, it is absolutely necessary to specify just what it means in the first place. The statement, "marihuana leads to dangerous drugs" is so loose that it is entirely possible to give correctly both a "yes" and a "no" answer to the question, given different meanings of the statement. Unless we specify the meaning of drug "escalation," the entire issue is meaningless and absurd.

Different observers have different conceptions of what is meant by "progression" from marihuana to other drugs. By some definitions, marihuana does not "lead to" the use of dangerous drugs; by others, it does. Very few observers of the drug scene take pains to specify which of these various meanings is intended, or, indeed, are even aware of what the statement means.

In order to gather information on the question of marihuana "leading to" more dangerous drugs, it is necessary, therefore, to specify just what this proposition means in logical, readily testable, specific hypotheses. There are several problematic dimensions which require specification.

First, how much marihuana use constitutes "marihuana use"? When we say, for instance, that "marihuana use" leads to the use of heroin—what do we mean by "marihuana use"? Are we including within our universe of marihuana users everyone who has ever tried marihuana at least once? A huge proportion of all at-least-once marihuana users are merely experimenters—are they also "marihuana users"? By including them, we will arrive at one set of figures; we will confirm or refute one or another general proposition. If we were to include only regular users (say, everyone who has used marihuana weekly or more for the past six months), then we might arrive at a completely different set of figures on the incidence of dangerous drug use among "marihuana users", and confirm or refute an entirely different proposition. By concentrating only on daily users, a different answer will be "discovered." The answer we get on marihuana escalation depends entirely on our prior definitions.

Another issue which we would have to resolve before we could even begin to test the proposition is: how much dangerous drug use constitutes "use"? Weekly or more? At least once? Or an actual physical addiction? The public assumes a kind of automatic polarization in dangerous drug

use between the heavy user, or addict, and the complete abstainer. This turns out to be false. It is not a dichotomy, but a continuum—with shades of grey all along the continuum. We will find all levels of dangerous drug use.

Thirdly: which drugs are to be considered "dangerous drugs"? Should we use a legal definition? Or a pharmacological one? What do we mean by "dangerous" in the first place? Certainly, by almost any conceivable criterion, alcohol would be considered "dangerous". But most officials as well as the public majority, do not consider alcohol "dangerous," and the question of whether marihuana "leads to" alcohol—or the reverse—is never asked.

And fourth: what does "lead to" mean? Does it mean that marihuana is a direct cause of the use of dangerous drugs? Or is implicated in some way or another? Are we talking about an empirical association? Or what?

The point is, the answers to these questions have to be given. Yet, at the same time, they must be to some degree arbitrary. The specific questions asked grow out of the ideology of those asking the questions; thus, how we answer these questions depends on what purposes we have for answering them. How much "use" constitutes use for both marihuana and dangerous drugs is an issue which is defined by the various researchers investigating marihuana's role in drug progression. The most stringent test of the progression hypothesis would be that regular, or "chronic", marihuana use leads to an actual addiction, or physical dependence, to one or another, or any, of the dangerous drugs. This would be the rarest in occurrence, but at the same time, would be the most scrupulous test of the hypothesis. (As pointed out in the section on dependence and tolerance, a large component of one of the most prominent theories attempting to explain the progression from marihuana to dangerous drugs is contingent on this interpretation of use.)

The most inclusive (and most indiscriminate) interpretation of "use" would be that any use of marihuana leads to any use of any dangerous drug. This would be much easier to document, but would also be less meaningful as a test of the dynamic underlying the relationship. Since it is not altogether clear just what it would mean that a single episode of marihuana use "caused" a single episode of, say, heroin experimentation. We can conclude this discussion with a consideration of what marihuana "leading to" the use of dangerous drugs might mean in a causal sense.

Close attention must be paid to a careful definition of what constitutes the "use" of the dangerous drugs in question. A number of studies

have shown that in many milieux and social settings (such as on the college campus, where a huge proportion of all the illegal drug use in America takes place), the typical use of dangerous drugs is episodic and experimental, and usually is discontinued rapidly. Very few dangerous drugs appear to have any "persistence for the average user," to borrow Hindelang's (1971) phrase. From Goode's 1971 college survey, Table 1 below presents figures on persistence.

In the first column are the percentages of respondents who used each drug, of all those who had used it at all in the six months prior to the survey, more than five times; in the second column are the percentage of users, triers or experimenters who used the drug in question weekly or more in the six months prior to the survey, of all those who had used it at all (the second figure, obviously, is a part of the first):

Table 1.—PERSISTENCE IN THE USE OF VARIOUS DRUGS
[In percent]

	6 or more times in past 6 months	Weekly or more in past 6 months	Ever used in sample— past 6 months
Cocaine.....	46	8	15
Opium.....	31	2	11
Heroin.....	21	14	4
Methedrine.....	44	6	8

Source: Goode, 1971b.

In contrast with the episodic nature of the use of most of the dangerous drugs in this study, marihuana was used by 79 percent of the respondents at least once in the six months prior to the survey, and of these, slightly over half had used it weekly or more. The only other drugs which a majority of users and triers had taken six or more times in the previous six months were two legally manufactured (but usually illegally acquired) prescription drugs—amphetamine (which 66% of the at-least once users had taken 6 or more times) and barbiturates (which 58% of all at-least once users took 6 times or more).

Thus, if we were to conclude that in the typical case marihuana use is a "stepping stone" to serious intense and chronic dangerous drug involvement, merely because a certain proportion had tried a given drug, we would be very much in error, since dangerous drug use for the average at-least once "user", on the college campus at least, is experimental, and not frequent and regular.

Other studies have verified this finding. A survey at York University in Toronto found that

while only a quarter (26%) of the marihuana users had used the drug less than 10 times, this was true of 57% of the at-least once users of psychedelics, 45% of the users of amphetamine, and 71% of the users of the opiates (Kohn and Mercer, 1971). Table 2 shows the relative distribution of the persistence in use of various drugs; the figures are based on a study done at Bishop's University in Canada in 1970:

Table 2.—PERSISTENCE IN USE OF VARIOUS DRUGS
[In percent]

	5 times or fewer	6-25 times	More than 25 times
Marihuana.....	40	27	33
LSD.....	55	28	16
Opium.....	75	20	5

Source: Campbell, 1970: 16.

After reviewing the data from his survey of school children in Toronto, Smart (1971) comments on this differential persistence phenomenon: "It is only for marihuana that regular users outnumber experimenters" (Smart, 1971: 297).

This point also applies to plans for future use of drugs. Since the persistence rate of marihuana is much greater than for any of the currently-used illicit drugs, it is also the drug which the universe of all at-least once triers are most likely to intend to use in the future. In a survey of the drug use patterns of over 26,000 students attending nine colleges and universities in the Denver-Boulder area, the authors (Mizner et al., 1970) empirically document the connection between persistence, intentions for future use, and the specific drug in question: "Marihuana is . . . the only one of the three drugs [the others are amphetamines and LSD] for which the proportion of drug users definitely planning future use exceeds the percentage definitely planning not to use it" (Mizner et al., 1970: 59).

It must be noted, however, that a high proportion of all studies done on drug use were conducted in college settings; does this generalization concerning the persistence of various drugs hold in non-college settings as well? In a study of a sample of Black male urban-dwellers, Robins and Murphy (1967) found that an extremely high proportion of all those who had at least tried heroin eventually became addicted to it (22 out of 28). The 1970 New York State Narcotic Addiction Control Commission's survey of a random sample of 7,500 New York State residents found that the various drugs used displayed quite different patterns of use, especially in regard to per-

sistence. Some drugs (such as LSD) tended to be used much more episodically than others (such as heroin).

Table 3 below, shows NACC's data on the persistence of various drugs. Goode calculated, from the study's raw figures, the percent that current users form of all at-least once users—that is, the percent having used at least once in the past six months as a total of all those who have ever used at least once in their lives; in addition, he calculated the percentage that regular users form of all current users—that is, of all those having used once or more in the past six months, what percent used six times or more in the past month?

Table 3.—PERSISTENCE IN USE OF VARIOUS DRUGS

[In percent]

	Current	Regular
Barbiturates.....	46	39
"Pep pills".....	44	29
Marihuana.....	61	47
LSD.....	60	25
Methedrine.....	43	33
Heroin.....	44	62
Cocaine.....	27	6

Source: Chambers, 1971b.

As can be readily seen, the use of many dangerous drugs is discontinued in the usual case. Most at-least once users of heroin are former users (56%). Cocaine appears to be the drug used least frequently, among those who use it, as well as the one most quickly discontinued. However, some drugs tend to polarize in use; although most heroin users discontinue its use fairly swiftly, among those who do continue, a high proportion begin using regularly—and probably become addicted as well—in the NACC sample, regular users were 62 percent of all current users. Marihuana was the only drug which was both used currently and regularly by a high proportion of at-least once users. In any case, the point should be clear. Whether we are discussing college drug users, or the drug use patterns of the general population, not all drugs which are used at least once are necessarily used regularly. With most drugs, experimentation is the rule; regular and even current use, the exception. With marihuana, however, it appears that the over-all persistence rate of use is higher than is true for any other class of drugs.

SUBGROUP VARIATIONS

Another serious qualification which must be registered even before we investigate the studies on the escalation process is that the rates of progression from marihuana to the use of dangerous

drugs vary from one group to another, and from one segment of the population to another. There is no automatic and standard proportion of marihuana users who "escalate" to the use of dangerous drugs, even the regular use of one or another dangerous drug. This rate varies enormously.

In some milieus and social settings, marihuana is much more likely to "lead to" the use of dangerous drugs than is true within other settings. And in addition: the specific drugs to which some marihuana smokers progress are different according to the social characteristics of the population in question. Within some groups, heroin may be the specific drug which is eventually used by some marihuana smokers; in other groups, it may be LSD. Marihuana use, per se, does not dictate the rates of progression, if and when it occurs, nor does it dictate which drugs might be used by the heavily involved user.

Which social groups are the highest "at risk" for progression? Among which segments of the population is the rate of escalation high, and which display a low rate? Some social characteristics which influence the progression from marihuana are: race, gender, and probably social class and religious background. Males using marihuana, even at the same level of use, stand a higher likelihood of trying and using dangerous drugs than is true of females. Blacks using marihuana will be more likely to use certain dangerous drugs, while whites stand a higher likelihood of using certain other dangerous drugs. It is also highly likely that individuals with a working class background, if and when they do "escalate" from marihuana, are likely to move in certain directions which are statistically different from those which individuals with a middle class background are likely to take. And it is possible that Jews who use marihuana stand a lower likelihood of escalating to the use of dangerous drugs than is true of gentiles.

Thus, whether or not a relationship exists between marihuana and dangerous drug use, and the degree to which it does exist, is highly contingent on social characteristics of the population in question. Whether or not, and to what extent, marihuana does lead to heroin use and addiction, for instance, is to some extent dependent on marihuana use, but at least as much due to the specific social network marihuana use implicates one in. That is, the implications of marihuana use are different if one is, say, white versus black, male versus female, and so on. The data point to enormously variable rates of progression. The same act, smoking marihuana, quite simply means different things in different groups. And it has

radically different consequences for different individuals and members of different groups.

A simple and across-the-board rule or generalization in regard to whether marihuana does, in fact, lead to the use of dangerous drugs is impossible—because the characteristics of drug use patterns from group to group are so highly variable. It is not the marihuana itself that “leads to” dangerous drug use—but the groups in which it takes place which provide the motive force.

As Goode has pointed out, blacks and whites appear to have roughly equal rates of trying and using marihuana. We would assume that, if marihuana use alone were the determining variable factor influencing the use of dangerous drugs, the rates of the use of dangerous drugs for the two races would also be equal. In actual fact, these rates are markedly different. There appear to be contrasting racial “styles” of drug use. Blacks are significantly more likely to try and to use cocaine and heroin than is true of whites; whites, on the other hand, are significantly more likely to try and use LSD, methedrine, and barbiturates, than blacks. In the sense of statistical differences between the races using specific drugs (and not in the absolute sense of one or the other racial group using certain drugs exclusively—which does not happen), there would appear to be “white” drugs and “black” drugs. (It is possible that the races may be converging in their styles of drug use—

but definitive data on this question are not available at present.)

In an extensive survey of drug use among 3,500 undergraduates attending 14 campuses in the New York area, sociologist Bruce Johnson demonstrated, among other things, the racial character of dangerous drug use. Although black and white rates of marihuana were almost identical, their rates of using various dangerous drugs were radically different. About twice as many blacks as whites had tried heroin (9% vs. 4%); the same was true of cocaine (16% vs. 7%). On the other hand, blacks were roughly half as likely to have tried methedrine (5% vs. 11%), amphetamine (9% vs. 19%), or one or more of the hallucinogenic drugs (13% vs. 21%). These differences were large enough to be able to say that the “escalation” process (almost all of those who used these dangerous drugs had also used marihuana) is largely a function of the group in question, and not simply of using marihuana, per se (Johnson, 1972).

The Narcotic Addiction Control Commission's 1970 study verified these racial differences in dangerous drug use (Chambers, 1971a). Table 4 below, presents figures on the racial composition of the regular users of various drugs—those that had used, that is, six or more times in the past 30 days—compared with the racial composition of the total sample (and hence, presumably, the population of the state of New York):

Table 4.—RACIAL COMPOSITION OF REGULAR USERS OF DANGEROUS DRUGS
(In percent)

	Sample	Marihuana	LSD	Other psychedelics	Methedrine	Heroin	Cocaine	“Pep pills”	Barbiturates
White.....	81	77	80	100	86	34	67	87	86
Black.....	11	10	4	(*)	9	38	17	1	6
Puerto Rican....	7	11	7	(*)	6	28	17	8	8

Source: Chambers, 1971a.
*Less than 1%.

As can be readily seen from this table, blacks are heavily over-represented among regular users of heroin, and somewhat over-represented among regular users of cocaine. On the other hand, they tend to be under-represented among users of the hallucinogens, or psychedelics, amphetamines (“pep pills”), and barbiturates; whites tend to use these drugs somewhat more than do other racial groups.

These data demonstrate an extremely important point relating to the progression process. This enormous subgroup variation in the tendency to “escalate” to other drugs from marihuana shows that it is impossible to attribute a biochemical

reason imperative to the occurrence of this phenomenon. Unless we wish to maintain that these racial differences are due to biochemical differences between the races (an extraordinarily implausible hypothesis), it becomes necessary to seek the social and cultural dynamics underlying differentials in progression. These data indicate that progression from marihuana to the use of dangerous drugs is a variable, and not a constant. It is not due to the simple properties of becoming “high,” or of using a certain chemical over a period of time, but to the values, attitudes, beliefs, behavior, activities, of individuals located within, and interacting among, specific social groups. It is the na-

ture of the social and cultural setting which dictates rates of progression—and not any biochemical reaction occurring within the human organism.

Another factor influencing subgroup variations among marihuana smokers in progressing to more dangerous drugs is the age at which the individual first used illegal drugs—whether it was marihuana or alcohol. It is probably a safe prediction that the younger a given individual first uses a psychoactive drug, the greater is his or her likelihood of eventually using other dangerous drugs. In the Robins and Murphy study (1967), “the age at initiation [into drug use] turns out to be a powerful predictor of the seriousness of involvement with drugs. . . . [The] earlier drug use begins, the greater the risk of going on to heroin or amphetamines, the greater the variety of drugs used, and the greater the risk of addiction or regular use” (Robins and Murphy, 1967: 1589).

The same generalization, incidentally, probably holds for sexual precocity, that is, the younger one's initial sexual intercourse takes place, the greater the likelihood of having intercourse with a greater number of partners eventually. (And, in addition, the greater the likelihood that one will use marihuana, as well as any other dangerous drug.) In both cases, precocity is a rough index of the degree of social “unconventionality” of the individual, and hence, the greater the chance of him or her pursuing other “unconventional” activities at a later point in time. The point is, of course, that age of first using marihuana is one of the many variables which influenced subgroup variation in the likelihood of escalating to dangerous drugs. This process is not a constant, and its variation points to the fact that it is a function not of the drug or its use, but of the nature of the group using the drug.

Sex is also a factor in differentials in escalating from marihuana to dangerous drugs. The variation is often more in which drugs are used than the frequency of use itself, although both vary by gender. In the NACC study, while the entire sample was made up of 47% males, the following percentages are the proportion of males who are regular users of the various drugs: cocaine, 67%; heroin, 67%; methedrine, 83%; LSD, 60%; other psychedelics, 53%; marihuana, 66%; “pep pills”, 40%. The drugs were obtained either entirely, or mostly, illegally, without a prescription.

The sex ratios of the use of dangerous prescription drugs, however, present a radically different picture. The percentage of regular users of prescription drugs (mostly obtained, that is, through a legal prescription—some quantity of all pre-

scription drugs is obtained illegally) who are male is as follows: barbiturates, 47%; non-barbiturate sedatives, 34%; “diet pills”, 20%; major tranquilizers, 42%; minor tranquilizers, 30%; non-narcotic analgesics, 37%; controlled narcotics, 24%; anti-depressants, 28%; stimulants other than amphetamines and cocaine; 25%.

Thus, women are overwhelmingly dominant in the legal use of prescription drugs, and did not “need” marihuana to escalate to the use of other drugs used regularly, but obtained them via a prescription for medical, quasi-medical, and pseudo-medical reasons. Men, on the other hand, tend to be far more likely to use illegal drugs of all kinds, including marihuana, and the escalation hypothesis appears to be more applicable to their dangerous drug use.

HISTORICAL PERSPECTIVE

Another qualification which must be registered regarding variations in progression from one study to another and one group to another is the historical factor. There do appear to be trends in drug use which influence rates of progression. Studies conducted in slum and ghetto environments more than a few years ago demonstrated an extremely high correspondence between marihuana use and heroin addiction (Chein, et al., 1964; Chein, 1956; Fort, 1954).

On the other hand, studies done in 1967 or before in colleges either show an extremely low rate of heroin use, or do not mention heroin use at all, combined with a moderate rate of the use of marihuana (King, 1969, 1970; Eells, 1968; Perlman, 1968; Imperi, et al., 1968). Recent trends have altered to a considerable degree relationships between marihuana and dangerous drugs, and the change may be quite different for inhabitants of different environments. The rates of the use of dangerous drugs other than marihuana have unquestionably risen on campuses across the country in the past few years—as much as, and possibly more than, the use of marihuana itself.

On the other hand, it is possible that dangerous drug use, particularly of heroin, takes place more often without the accompaniment of marihuana use—that is, it could be that more and more young people are using heroin as their first illegal drug. In any case, it is extremely important to keep in mind the historical dimension. Trends in drug use may render generalizations made a few years ago obsolete. Whether or not escalation from marihuana takes place, and the particular form it takes if it does, is entirely a time-bound process, and a culture-bound process as well. It does not occur in a vacuum or in a laboratory.

PROPOSITIONS ON THE PROGRESSION THESIS

An attempt is now made to isolate a number of empirically testable propositions on the progression thesis. In order to be meaningful, the question of marihuana "leading to" dangerous drug use must be spelled out in precise terms—as it almost never has been in any general discussion of the subject. What will follow will be a series of different possible meanings of the progression process.

Data have been accumulated on most of all of them, and studies will also be presented bearing on each specific proposition. Some of these propositions are true, and some false. Thus, the answer to the question, "does marihuana lead to dangerous drug use" would have to be answered quite simply: it depends on what is meant by the question in the first place. By some meanings, the data show that marihuana does, in fact, "lead to" the use of dangerous drugs. By other meanings, precisely the opposite generalization has been supported empirically—that marihuana does not "lead to" dangerous drug use. It is not that the data are contradictory; in fact, the data are fairly consistent on the issue. It is that the question is usually couched in vague and polemical and ideological language.

Quite simply, most people asking the question conceptualize the problem in a manner which fits in with their prejudices, either pro or con, and any manner of information is typically sought out to verify these prejudices. A broader and less ideologically-based investigation lends only partial support for both sides. The facts never arrange themselves along the lines of what some parties consider "good" or "bad," and thus, building an ideologically acceptable version of reality must inevitably be highly selective.

Here are a number of different meanings or propositions of the marihuana-to-dangerous drugs escalation process, all of which are precise enough to be tested empirically:

(1) A majority of all individuals who use, or who have used, tried, or experimented with, marihuana, will eventually use, try, or experiment with, at least one dangerous drug; the percentage of all users of cannabis who become users of any dangerous drug is over 50 percent.

(2) A majority of all users of marihuana eventually uses, and becomes addicted to, heroin.

(3) A majority of all narcotic addicts once used marihuana before their first heroin experience.

(4) A majority of all regular, or "chronic," users of dangerous drugs of all kinds once used marihuana prior to their first dangerous drug experience.

(5) A majority of all narcotic addicts "started with" marihuana; marihuana was typically the first psychoactive drug that addicts ever tried or used—marihuana was the initiating experience into psychoactive drug use.

(6) For a majority of all narcotic addicts, marihuana was the first illegal drug ever tried or used—marihuana provided the initiation into drug-related crime.

(7) Using or trying marihuana increases one's statistical or actuarial chances of trying or using any dangerous drug, including heroin, and increases one's likelihood of becoming seriously involved with dangerous drugs; marihuana smokers have a statistically higher likelihood of using any dangerous drug, including heroin, than is true of a comparable group of non-users.

(8) The more that an individual smokes marihuana, the greater is his likelihood of experimenting with, and using regularly, any illegal drug, including heroin.

(9) The rate of marihuana use is increasing proportionally with the rate of dangerous drug use, including addiction to heroin.

(10) If by some method, marihuana and its use could be eliminated or decreased, the use of other dangerous drugs, including heroin, would drop, since marihuana is the "precursor" to the use of all, or nearly all, illegal dangerous drugs.

(11) The buying and selling of marihuana is related to the frequency of marihuana use, and the use of other dangerous drugs.

(12) Marihuana use and the use of dangerous drugs (including heroin addiction) are causally related; marihuana use is one of the (or the) crucial cause of and for the use of dangerous drugs, including addiction to heroin.

Are these generalizations true or false? Is there definite empirical evidence for the progression hypothesis? Unfortunately for the propagandists of both sides, the data do not fall clearly on one or the other side; some of these propositions are true, and some false. As to whether or not the progression process is confirmed or denied depends on the facts less than on our ideological predelections.

Is *proposition (1)* true? Do most marihuana users eventually use more dangerous drugs? The answer to the question would have to be that it depends entirely on the population under study. Which "marihuana users?" It is not that the data are contradictory, but that there are conflicting answers among various studies. It is that marihuana progression does not occur at a constant rate. Different groups quite simply use dangerous drugs, and especially different dangerous drugs, at different rates. To expect some standard and uni-

form rate emerging out of a single experience—using marihuana—would be to adopt a naive and simple-minded conception of everything connected with the phenomenon of drug use. The time factor, for instance, has to be taken into account. Many early studies (conducted before, say, 1968) showed extremely low rates of the use for nearly all dangerous drugs, especially in college milieux.

More recent studies have revealed increases in dangerous drug use; most marihuana users in the middle 1960's, especially on the college campus, probably did not progress to the use of dangerous drugs. This is not so clear today. These two facts concerning any marihuana-using population studied—its social characteristics and composition, and the date of the survey—will determine, to a large degree, what proportion of individuals in the study have used dangerous drugs, and not simply whether they smoked marihuana or not.

In a 1967 interview study by Goode of a broad cross-section of marihuana users—almost certainly more heavily weighted in the direction of more involved users—residing in New York City (an area which has a high access to dangerous drugs), he found that the clear majority, or 68%, had at least tried one or more dangerous drugs (Goode, 1969a). In another survey, of 400 undergraduates attending a course in "deviance and delinquency" in May 1971, at a large East coast state-supported university—the bulk of which (or 79%) had smoked marihuana once or more in the six months prior to the survey—Goode found that the majority of the marihuana experimenters and users (or 57%) had also at least experimented with one or more dangerous drugs; only 43% of the marihuana smokers in this survey were "marihuana only" users. In Robins and Murphy's study (1967), often cited for supporting the stepping stone hypothesis, only 49% of the marihuana users of a heavy dangerous drug-using sample had tried any other drug. And Whitehead's survey (1970) showed a clear majority of all marihuana users (or 68%) to have used at least one of a range of illegal dangerous drugs. Clearly, a sizeable proportion of marihuana users in a wide range of studies have at least tried one dangerous drug.

Proposition (2), that a majority of all cannabis users eventually uses or becomes addicted to heroin—is unquestionably false. It is false regardless of how we define marihuana "use," and it is false if we include one time experimentation with heroin. It is false regardless of what groups in the population we were to focus on. It was false yesterday, and it is false today. No study ever conducted has ever shown a majority of all marihuana users progressing to the use of heroin.

In three studies Goode conducted, among heavily drug-using populations, only a small majority had ever tried heroin. It was 13% for the 1967 marihuana smokers study (Goode, 1969a), and about 5% for the 1970 and 1971 surveys (Goode, 1970, 1971b). Most of the findings of other studies put the figure at about this level, or, more unusually, significantly lower than this. Again, however, the exact level is heavily dependent on the characteristics of the group or groups being studied.

A survey of the student body of the State University of New York campuses, with over 7,000 respondents, conducted in May 1969 (Anker et al., 1971), found that a miniscule minority had ever tried heroin. Out of the total, a quarter (25%) had at least tried marihuana, but less than 1% had tried heroin. Even if all of the heroin-triers had also tried marihuana (which is typically the case), then only 1 marihuana user or trier in 25 "progressed" to the use of heroin.

A survey of a random sample of all college students in Florida conducted in 1970 showed that marihuana had been used at least once by a large minority of the sample, or 25% (it was the illicit drug *most* likely to be used), heroin had been sampled by a tiny percentage of the students (2%); heroin was, of all the drugs asked about, the *least* likely to have been tried (Killinger, et al., 1970).

The 1970 Narcotic Addiction Control Commission study of 7,500 New York State residents age 14 and above found that of all regular users of marihuana—who used the drug 6 times or more in the 30 days prior to the survey—about 3.5% said that they had also used heroin regularly (Chambers, 1971a). In comparison with the other drugs asked about in the survey, heroin was the eleventh most "popular" drug used by marihuana smokers, after marihuana itself. It ranked behind "pep pills," or amphetamines (which 14% of the regular marihuana users had also used regularly), barbiturates (used regularly by 13% of the regular marihuana smokers), LSD (9%), minor tranquillizers (9%), diet pills (7%), methedrine (7%), non-barbiturate sedatives (4%), "non-controlled narcotics and prescription non-narcotic analgesics" (4%), stimulants other than amphetamines and cocaine (4%), hallucinogens other than LSD (4%), and it ranked just ahead of major tranquillizers (2.1%), antidepressants (2.1%), cocaine (1.2%), and non-heroin controlled narcotics (0.8%). In fact, of all of the drugs used by marihuana smokers in this NACC study, the majority, or 10 out of 15, were obtained mostly via legal prescriptions. Of all the various

dangerous drugs used on a regular basis by marihuana smokers, heroin tended to be one of the least often used.

Even the Robins and Murphy study, of 235 adult black males in St. Louis, usually cited as powerful evidence of the validity of the "stepping stone" hypothesis, showed that a minority of all marihuana users and triers, or 22 out of 103 of the respondents, had eventually become addicted to heroin (Robins and Murphy, 1967); in fact a minority (28 out of 103) had even tried heroin. This is, of course, an extremely high figure, in fact, one of the highest ever turned up in a study of this type, but it is very far from a majority.

Another study growing out of research sponsored by the New York State Narcotic Addiction Control Commission was conducted by sociologists Glaser, Inciardi and Babst (1969). Although this paper is, like that of Robins and Murphy's, often cited as evidence for the escalation hypothesis, again, less than half of the sample of marihuana users became involved in heroin use. A five- and 10-year follow-up study was conducted of about 700 males who were, in 1957 and 1962, referred to the New York City Council Bureau, "an agency established for handling juvenile and youthful persons alleged to be delinquent or criminal and not deemed sufficiently advanced in their misbehavior to be adjudicated by the courts" (Glaser et al., 1969: 147). The following three offenses were considered and compared: marihuana use, heroin use, and nondrug delinquent offenses.

The study then checked the appearance of the names of the members of its sample in the Narcotics Register, supposedly "the most complete file of its type available anywhere in the United States." The data appear to confirm the progression hypothesis: "while half of the male adolescent heroin users had a heroin record five or 10 years later, about 40% of the marihuana users also acquired a heroin record in this follow-up period." The NACC researcher's conclusion is that "marihuana use as an adolescent is almost as portentous as adult heroin use." (Glaser et al., 1969: 148-149).

The authors strongly qualify the report's findings in their conclusions; they are not guilty of an overextension of the applicability of their results. Of the four groups which the authors point out as most likely to use marihuana—the slum dweller, the "bohemian," the college student, and the high school student (today we would have to include the member of the armed forces)—it is only among the first (and to some degree, the last) that the study's data was likely to be drawn from. And it is in this group that the transition to

heroin use among marihuana smokers is most likely. In the other groups, the use of heroin among marihuana users is far less likely. Had the NACC study covered all of the marihuana-using groups, the likelihood of later heroin use would have been much lower.

In fact, the NACC findings are even more narrowly applicable to the broad spectrum of all marihuana users than the above qualification would lead us to believe. The marihuana smoker whose use of the drug is so conspicuous as to come to the attention of authorities cannot be said to represent users as a whole. To come to the attention of any agency of law enforcement of any kind is to be a part of a highly special and unrepresentative social group. Such users are far more likely to be more highly involved with marihuana, to be implicated in some of the more heavily-sanctioned marihuana-related activities, such as selling, and to be incautious about their marihuana use.

A participant observation (and non-statistical) study of drug use in the Oakland working-class neighborhoods, by Herbert Blumer and his associates (1967) emphasizes the importance of style in drug use. Among the largest sector, the so-called "cool" style, dominates marihuana users; in this group, the emphasis is on being inconspicuous, on weaving marihuana use into recreational activities, on avoiding illegal activities other than marihuana use, and on avoiding addicting drugs.

The kind of marihuana user which was likely to attract attention in the Blumer study was the so-called "rowdy." This segment of marihuana users was most likely to attract official attention, to become arrested, to become placed on a record such as the Youth Council Bureau's, and, in addition, to move on to the use of more dangerous drugs such as heroin. The "rowdy" marihuana segment, therefore, was specifically that type of user that was most likely to get into the NACC's sample.

The more cautious user was both unlikely to be studied, and to later use heroin. The NACC probably selected the segment of users which has the very highest likelihood of later heroin use. The progression hypothesis holds up best in the very group wherein the Commission gathered its data.

In addition, lower-class adolescent slum-dwellers are far more likely to come to the attention of formal legal control than is true of the middle-class suburban or college young person. For the latter, informal, nonrecord, nonarrests implementation is more likely than is true of the former. Again, it is a certainty that the progression to heroin is most likely among slum dwellers, which

the authors themselves state, and least likely at the top of the class structure, which is distinctly underrepresented in official records. The process of officially recording an individual's illegal behavior is highly contingent on social class, neighborhood, race, and education. Official notice is, in fact, immersed in the very process the NACC authors are trying to explain. The problem is not with differentials of law enforcement involvement, as the authors imply (i.e., drug offenders), but with involvement with the law at all as opposed to no involvement at all.

In a 1967 study of marihuana smokers by Goode, only seven respondents out of the 204 had ever been arrested on marihuana charges, and not one had been incarcerated for that offense. To have reasoned about the drug use characteristics of this tiny handful concerning the activities of all users would have led to erroneous conclusions.

Proposition (3), that most heroin addicts once used marihuana, is, again, highly contingent on the characteristics of the addicts under study. Most studies have found this to be true. But the picture is not quite so simple. The question is not resolved by a nose-count, but by a careful sifting out of the conditions under which it is true, in comparison with those conditions under which it is not true. Only then can a realistic understanding of the dynamic forces underlying the transition to heroin from marihuana be assembled.

A British report (Chapple, 1966) indicated that 70 out of the 80 heroin addicts under study had, previous to the interview, once used marihuana. The author includes within the sample of 80 some "cocaine addicts." Cocaine is not a physically addicting drug, but can cause severe psychological dependence. This has been taken to indicate that marihuana does, in fact, lead to the use of heroin. Actually, the British example does not lend a great deal of support for the marihuana stepping-stone theory, since it is amphetamine, and not marihuana, which is far more the "introduction" to illegal drug use (excluding alcohol, of course). In a survey of over 100 British teen-age drug users (Hindmarch, 1971), it was found that amphetamines had been used at least once non-medically by about three times as many young people as was true of marihuana. Amphetamines form a significantly greater part of the drug use of the illicit drug-using subculture in Great Britain than is true in the U.S., whereas marihuana plays that role here more than in Britain.

A number of American studies lend support to the marihuana-to-heroin process through retrospective studies of addicts. This is probably somewhat more true of early studies than later ones.

A survey of over a hundred addicts at the U.S. Public Health Service Hospital at Lexington (Fort, 1954) conducted in 1951 and 1952 found that: "Most, although not all, of the young heroin addicts studied gave a history of smoking marihuana. The extent, however, varied from an occasional smoke for a few months to steady smoking for years."

A different study of 100 young slum-dwelling heroin addicts, whose interviews were conducted in 1953 (making the study very much out of date), reported that "experimentation with heroin followed a period of smoking marihuana cigarettes; 83 of the 96 heroin users who answered this question had smoked marihuana, 40 of them regularly, before they began using heroin" (Chein et al., 1964: 149). However, the senior author of this report, in an earlier paper based on the same data, warns that: "There is some more recent evidence that some beginners may not start with heroin without the intervening step" (Chein, 1956).

In 1965, about 800 black addict-patients were admitted to the federal addiction hospitals in Lexington and Fort Worth; 84% reported having used marihuana during their drug experimentations (Chambers et al., 1968). Males were significantly more likely to have used marihuana than females (93% vs. 68%), but among both, marihuana experimentation and use was more common than a "narcotics first" or a "narcotics only" pattern. Moreover, using marihuana (typically, before using narcotics in time) was associated with a more committed addiction as well as a criminal pattern.

Addicts who had used marihuana, as opposed to those with no history of marihuana use, were more likely to have sold narcotics, to have used other drugs as well—in addition to narcotics and marihuana, such as barbiturates—and to have had an arrest record. In other words, not only did a clear majority of these black addicts have some marihuana experience prior to their narcotics addiction, but marihuana use was also associated with, and could have been used as an indicator of, intense (as opposed to comparatively superficial) involvement with narcotics and narcotic addiction.

In another study, 235 black males born between 1930 and 1934 in St. Louis, whose names were selected from public elementary school records 26 to 30 years prior to the study, were interviewed in 1965 and 1966 on various topics dealing with, and associated with, drug use (Robins and Murphy, 1967). Forty-nine percent of the respondents had used marihuana once or more; 28 individuals, slightly more than 10 percent of the sample, had tried heroin, 22 of whom had become addicted. Of

the heroin-users taking the drug six or more times, all became addicted to it. Marihuana was clearly implicated in heroin use and addiction in this study. Only one heroin-using respondent (who had actually tried heroin only once) had not used marihuana at all; 96% of the individuals using heroin had also used marihuana. Three-quarters of the heroin users had used marihuana before trying heroin, 7% had tried marihuana after taking heroin, and 14% took it the same year as trying heroin. Of the 109 respondents in the Robins and Murphy sample who had illegally used one or more of the drugs asked about (marihuana, heroin, amphetamines, and barbiturates), 103 had tried marihuana once or more.

The authors conclude from their data: "Virtually everyone who used any [illegal] drug used marihuana. Thus marihuana must have been both widely available and widely acceptable. It served as the introduction to drugs for most of those who went on to other drug use. . . ." These data, Robins and Murphy state, are "in keeping with the commonly held belief that marihuana is a stepping stone to heroin . . ." (Robins and Murphy, 1967: 1595, 1588). (The authors also remind the reader that "half of the marihuana users never used any other drug.")

Up until this point, nearly all available studies have supported proposition (4), that a majority of all narcotic addicts used marihuana prior to their use of addicting narcotics. However, this generalization is far from being a universal. A number of studies have found the reverse. In fact, exceptions to a rule are more valuable to anyone seeking to determine a phenomenon's cause than cases which conform to the rule, because only then can the conditions under which the generalization holds be sought and found. If a certain factor is missing, then we would also expect its outcome to be missing as well.

In summarizing the drug situation in Vancouver prior to 1965, one researcher (Paulus, 1969), writes: ". . . the Narcotic Addiction Foundation had listed approximately 1,200 heroin addicts as patients. Very few of these patients had a history of marihuana use previous to the onset of narcotic use. A perusal of the 1,200 case files showed that alcohol, barbiturates, or other hard narcotics preceded heroin use, if and when heroin was not the first drug used" (Paulus, 1969: 77-78).

Marihuana use, then, is certainly not a necessary condition for becoming a narcotic addict in America—for some groups. In a study of 98 physicians who were addicted to narcotics, Winick (1961) found that "none of the physicians ever smoked marihuana." In other words, there are quite obviously specific social forces which gen-

erate addiction in the absence of marihuana use—namely, availability of narcotics, work stress, and knowledge of drug technology and effects to alleviate discomfort. Where these factors are present, addiction to narcotics, will occur more frequently than when they are absent—regardless of whether marihuana is present or not. Clearly, the "progression" from marihuana is not natural, inevitable, nor is it necessary, as the physician narcotic addict case shows. (Various estimates place the proportion of American physicians who are addicted at over one in 100, or approximately 3,000 physician narcotic addicts.) There are addict groups whose marihuana use is below 50%—in this case, exactly zero. We should not attach ritualistic or magical significance to the majority notion. If and when drug progression does occur, it is due to social and psychological forces; these forces are variables, and not constants.

By finding groups whose patterns of behavior vary from the norm, we are better able to understand the dynamic forces underlying the process we are attempting to explain. Given the fact that marihuana use is not essential for large groups of addicts to have become users of narcotics, we see clearly that the chemicals themselves do not dictate to the human body the patterns of behavior observed, but rather they grow out of social roles, forces, demands, expectations, and values.

Another study making this point even more strongly is a drug use survey conducted among over 2,000 narcotic addicts admitted to the two federal hospital-prisons in Lexington and Fort Worth in 1965. The research design was devised to answer the following questions: "Given existing social conditions and laws, is the smoking of marihuana associated with the subsequent use of opiate drugs? If so, under what conditions? If not, under what conditions?" (Ball, Chambers, and Ball, 1968.) The authors schematize the issue into a four-fold table, inquiring as to whether cases conform to a "marihuana only," a "narcotics only," or a "marihuana and narcotics" pattern:

Marihuana use		Yes	No
Narcotics use	Yes	(1)	(2)
	No	(3)	(4)

The "progression" thesis would be confirmed if the bulk of the cases fell into cell (1), where both marihuana and narcotics are used. (The priority of each drug is also a matter to be investigated.) On the other hand, if the large proportion of the cases fall into cells (2) and (3), then the progression hypothesis would be disconfirmed. (Actually,

these questions can be answered only in a limited way with Lexington data, since individuals typified by cell (3) would not appear in the sample. The magnitude, or, indeed, the very existence, of "marihuana only" cases would not be known, since they would never come to the attention of officials or researchers of these federal addict institutions.)

Although this report, conducted by sociologists John Ball and Carl Chambers, has been cited by proponents of the progression hypothesis as strong evidence that marihuana does lead to narcotic addiction (Giordano, 1968), actually, the data demonstrates almost precisely the opposite contention. The Ball and Chambers data show that the issue of whether or not marihuana is a precursor to narcotic addiction is totally dependent on the social and cultural setting in which drug use takes place, as well as the nature of the drug market. In other words, any progression that does occur appears not to be a function of the drugs themselves which are used, not "caused by" the use of marihuana, but grows out of the nature of the society and the communities in which drug use is imbedded. The crucial factor in this study was not the use of marihuana *per se*, but the existence of an illicit drug subculture. Ball and Chambers' data showed just how variable the existence of this subculture was.

The majority of the addicts coming from most of the areas of the South—from Oklahoma in the West, to West Virginia in the North, to Florida in the South—conformed to cell (2), or "opiates only" pattern. The typical pattern for addicts from 12 states of the South was to have become addicted without ever using marihuana. In other words, in certain settings, the use of marihuana is not necessary for narcotic addiction.

Under specific social and cultural circumstances, marihuana is not a "precursor" to addiction to narcotic drugs. The southern addicts tended to become addicted in isolation from other addicts, without subgroup or subculture support, and without contact, typically, with "underworld" sources of supply. An extensive pattern of addiction grew up in the South without the accompaniment of extensive marihuana use; the less potent drug was not "necessary" for precipitating the use of more dangerous drugs.

On the other hand, addicts coming from the North (plus Texas and Louisiana) tended to conform to pattern (1)—marihuana plus narcotics. In these areas, a vigorous drug subculture does exist, and marihuana use tends to precede the use of narcotic drugs. Addicts from areas of the North, especially if they were from metropolitan communities, tended to begin drug use earlier, to also be involved with other criminal activities, to have

an earlier and longer arrest record, to have become addicted specifically to heroin (as opposed to other types of narcotics), to use the intravenous route of administration—and to have used marihuana.

Thus, using drugs, and becoming addicted to narcotics, is the culmination, the most extreme form, of a well-developed, elaborated, way of life, a complex of behavior and values—a "subculture." No single part of the complex "causes" any other part. Delinquency does not necessarily "cause" heroin addiction, though it occurs before, and though the two tend to be empirically associated in this type of setting. Each of the elements in the complex is found there as a consequence of the conventions and drug market networks established over time, within a broader cultural, legal, and economic setting. Marihuana use tends to be a part of these conventions and patterns, of these market networks, but its existence in this complex is neither inevitable nor necessary—as the southern case shows.

The police commonly cited the fact that 70 percent of the addicts in the Ball-Chambers sample had once used marihuana as the crucial finding of the study (Giordano, 1968). Actually, the contribution of this study was to investigate the conditions under which the progression process occurred, as well as the conditions under which it did not occur—and thus, to pin-point possible causes. Showing that marihuana is not necessary for the existence of narcotic addiction, under certain social conditions, demonstrates the fact that marihuana *per se* has little to do with the progression, if and when it does occur, but rather the existence of an illicit drug-using subculture is most crucial in this regard.

In another Lexington study, over 1,000 addict-patients admitted to the federal hospital between 1967 and 1969 were interviewed as to their drug use patterns (Weppner and Agar, 1971). Questions were asked concerning which drugs they had been "hooked" on—that is, which they used regularly, frequently, or on "sprees" and when they were "hooked" on them. If the marihuana-to-narcotics pattern were valid, it would be verified by these data.

These researchers found that there was a large degree of variation from this classic pattern. Of the 738 individuals who had been "hooked" on heroin at any given time, for 40% heroin was the first drug on which they had been "hooked." For this group, there had been no immediate serious precursor at all to heroin. For the other 60%, or 446 addicts, who had become "hooked" on heroin after being "hooked" on some other drug, a wide range of drugs actually turned out to have been immediate precursors to heroin addiction.

In fact the following percentages appeared: marihuana, 36%; alcohol, 18%; other narcotics aside from heroin, 18%; stimulants, 9%; cough syrup, 8%; sedatives, 7%. (A wide variety of other drugs were used by less than 2% of the sample.) In other words, regular marihuana use appeared as an immediate precursor to heroin addiction in only 36% of the cases where there was some precursor, or only 22% of the total cases, including those where there had been only a heroin dependency, without another precursor. The regular use of marihuana, then, actually turns out to be a small minority phenomenon in the life history of heroin addicts. There is, in fact, an extremely wide range of substances which are used regularly or frequently which also "lead to" heroin addiction. Specifying marihuana as playing the role of a "precursor" is possible only by mentally blocking out all of the other substances which also may play this role.

Moreover, there were also large differences between various groups in regard to the role that marihuana played as a precursor to heroin addiction. Marihuana and alcohol, added together, accounted for about two-thirds of the cases of immediate precursors among the older addicts (26 and over), but only 42% for the younger ones. This means that the role of marihuana (and alcohol) in "leading to" heroin addiction is probably diminishing over time, as a wider range of drugs is used either first, at an early age, or immediately prior to heroin; barbiturates and amphetamines appear to be playing this role today.

Secondly, blacks tended to concentrate their immediate precursors to heroin specifically on alcohol and marihuana (69%), whereas whites were much less likely to use marihuana or alcohol regularly just before heroin (38%), and to use many other different drugs. These substantial group differences in drug use patterns underscores the point that progression sequences grow out of social conventions and not the simple use of marihuana. If in one group, marihuana does not "lead to" the use of heroin, and in the other, it does, then the variable outcome cannot possibly be explained by the constant element—the use of the marihuana itself. The drug, marihuana, the chemical, tetrahydrocannabinol, does not appear to "lead to" the use of dangerous drugs—but one's peers in a drug-using subculture will influence one's use of drugs—which ones, when, and how often. As to whether marihuana is a part of this social and cultural complex is a variable, and not a constant. The drug-taking history of narcotic addicts shows the extreme variability in marihuana's role as a "precursor" to the use of dangerous drugs, and not a constant pattern.

Proposition (4), that regular, or "chronic" users of dangerous drugs have used marihuana, or are using marihuana—depends entirely on the drug in question. For some drugs, it is overwhelmingly true; for others, it is considerably less the case; for still other drugs, it is practically not at all the case. The major difference is whether the drugs were obtained legally or not. That is, heavy users of many legal drugs, such as barbiturates and tranquillizers, even if they are physically "addicted," are no more likely than the rest of the population to use marihuana. However, users of most illegal drugs are highly likely to use marihuana.

The survey conducted in New York State by the Narcotic Addiction Control Commission in 1970 (Chambers, 1971a) reported the connection between "regular" use of dangerous drugs and the use of marihuana. At the same time, it showed a wide disparity among even illegal drugs in this respect.

A low proportion of regular users of legally obtained drugs were also current users of marihuana. However, an extremely high proportion (for some drugs, 100%) of the regular users of several illegal drugs currently used marihuana. Table 5 shows this relationship. The figures are the percentages of regular users of each drug (who used it six or more times in the 30 days prior to the survey) who also used marihuana or hashish regularly, along with whether the drug was obtained by a local prescription or not.

Table 5.—REGULAR USE OF MARIHUANA BY REGULAR USERS OF VARIOUS DANGEROUS DRUGS

Dangerous drug	Percent who are regular users of marihuana	Percent who obtained by prescription
Minor tranquillizers.....	8	88
Nonnarcotic analgesics.....	10	74
Sedatives (nonbarbiturate)....	11	74
Major tranquillizers.....	14	94
Diet pills.....	16	76
Barbiturates.....	17	81
Controlled narcotics.....	24	71
Antidepressants.....	26	82
Heroin.....	53	0
Stimulants (non-amphetamine and non-cocaine).....	59	45
"Pep pills".....	61	35
Methedrine.....	91	0
Cocaine.....	100	0
LSD.....	100	0
Other hallucinogens.....	100	0

Source: Chambers, 1971a.

Marihuana's implication in patterns of dangerous drug use varies from one dangerous drug to another. It is weak with legally obtained prescription drugs, with the exception of non-amphetamine and non-cocaine stimulants, such as Ritalin. Not quite half of the regular users of this type of drug, or 45% said that they obtained all of what they used via a legal prescription, and over a third, 39%, got some of their supply of the drug legally. At the same time, over half of the regular users of this drug type were also regular users of marihuana.

In general, for completely illegal drugs, the connection with marihuana is extremely strong—with the exception of heroin. Of all completely illegal drugs, the marihuana-heroin link appears to be the most tenuous. Only about half of all regular heroin users (most of whom are probably addicted) also use marihuana regularly, but this is 100% for regular users of cocaine and the hallucinogens.

All regular users of psychedelic drugs also use marihuana regularly. The explanation for the drop in marihuana use among heroin users appears to be that addicts typically discontinue the regular use of all drugs when they become addicted, although they will use many drugs sporadically. Heroin becomes the central focus in their lives, and all other drugs, in fact, activities of almost any other kind, become irrelevant. The drugs which had a stronger link with marihuana, such as LSD, methedrine, and cocaine, tended to be used on less than a two, three, four, or five times a day basis, as heroin is. Even a "regular" user of cocaine or LSD will typically not use the drug daily—and hence, it will not dominate one's life the way that heroin tends to do.

The fact that a huge proportion of regular users of many dangerous drugs continue to use marihuana regularly indicates the invalidity of the "disillusionment" theory of progression. That is, marihuana users do not "progress" to the use of other drugs because they no longer receive psychic benefits from marihuana, because the effects of the drug are becoming attenuated over time.

In fact, the use of marihuana does not drop away as the use of (some) other dangerous drugs increases. The two are not, in general, incompatible—in fact, most users of most illegal drugs continue to use marihuana. It is the user of other dangerous drugs, to turn the formula around, who has the highest likelihood of using marihuana, and regularly. This point deserves elaboration; this will be found in the section which deals with the "causes" of drug progression.

Propositions (5) and (6), that addicts "started with" marihuana, that marihuana was the first

illegal psychoactive drug that most, or nearly all, addicts ever used, that marihuana provided the "introduction" into drug-related crime—is not quite true. Since the legal age for drinking alcoholic beverages in all states is between 18 and 21, and since drug users have a far higher rate of alcohol consumption than non-users of illegal drugs, especially at a more precocious age, it is readily apparent that the first experience most addicts have had with a prohibited (for them) psychoactive drug is with alcohol, and not marihuana. Typically, individuals who eventually become addicted began their use of a psychoactive drug with alcohol, and not marihuana; alcohol typically preceded the use of marihuana in sequence.

The statement that addicts "started with" marihuana is a mental construct, and not a hard empirical reality. It is a case of selectively perceiving certain aspects of a phenomenon, and ignoring others. It is because most of the populace and many officials do not regard alcohol as dangerous, as a drug, or even illegal (for some segments of the population), that it is not seen as a "precursor" to dangerous drug use.

The fact is, underage drinking of alcoholic beverages tends to be the first experience most drug users, whether narcotic addicts, marihuana users, or even heavy users of prescription drugs, have with a psychoactive drug which is forbidden to them by law.

Proposition (7), that marihuana users have a significantly higher chance of trying and using a wide range of dangerous drugs than is true of non-users of marihuana—is unquestionably true. To borrow a term from insurance, one's "actuarial" chances of using dangerous drugs is considerably higher if one uses, or even has tried, marihuana, than if one has not. Currently, no study investigating this relationship has failed to find a positive association between the use of marihuana and the use of other dangerous drugs.

The Narcotic Addiction Control Commission's study of the drug use patterns of residents of New York State in 1970 clearly shows this relationship. Table 6 below shows the percent of all regular marihuana users in the NACC survey (Chambers, 1971a) who also used various other dangerous drugs regularly. (These statistics were alluded to earlier in the discussion of which dangerous drugs were most likely to be used by marihuana users.) Next to that is the percentage of all respondents in the sample, and hence, in New York State, who are regular users of each drug. This shows the degree of "over use" among marihuana users of the regular use of each dangerous drug. One's actuar-

Table 6.—REGULAR USE OF OTHER DANGEROUS DRUGS BY REGULAR USERS OF MARIHUANA, COMPARED WITH TOTAL SAMPLE

Dangerous drug	Percent of regular marihuana users taking this drug	Percent of total sample taking this drug	Increase in statistical likelihood of using this drug (times)
Minor tranquillizers....	8.6	3.8	2.3
Nonnarcotic analgesics....	4.1	1.4	2.9
Sedatives (non-barbiturate).....	4.1	1.4	2.9
Major tranquillizers.....	2.1	.5	4.2
Diet pills.....	7.2	1.6	4.5
Barbiturates.....	12.5	2.6	4.8
Controlled narcotics....	.8	.1	8.0
Antidepressants.....	2.1	.3	7.0
Heroin.....	3.5	.2	17.5
Stimulants (nonamphetamine and non-cocaine).....	3.9	.2	19.5
"Pep pills".....	13.8	.8	17.3
Methedrine.....	6.6	.3	22.0
Cocaine.....	1.2	.1	12.0
LSD.....	9.2	.3	30.7
Other hallucinogens....	3.9	.1	39.0

Source: Chambers, 1971a.

ial chances of using each drug are increased by the use of marihuana.

As can be seen in the table, regular marihuana users are about five times as likely to use barbiturates regularly as is the sample as a whole, about 10 times as likely to use cocaine regularly, and so on.

It can be readily seen from Table 6 that the percent using any dangerous drug is higher among regular marihuana smokers than among the sample as a whole. (Actually, the discrepancy would be even greater if non-users of marihuana were compared with users; obviously, users are included within the total sample, and bring the percentage using other drugs up a bit.) One's actuarial chances of using other dangerous drugs increases if one is a regular user of marihuana. This holds for legal as well as illegal drugs, although the increase is considerably greater for illegal drugs.

A random sample of approximately 13,000 adolescents who were students in grades seven through 14 in the larger cities of Eastern Canada—Halifax, Montreal, and Toronto—turned up essentially the same finding (Whitehead, 1970). For all drugs, the likelihood that a given young marihuana user (who had at least tried the drug once or more) would try or use it was considerably greater than for any given non-user of marihuana. Table 7, below shows the percent in each group

Table 7.—PERCENT TRYING VARIOUS DRUGS BY MARIHUANA USE

	Marihuana user (N=911)	Nonmarihuana user (N=12,000)
Tobacco.....	86	39
Alcohol.....	84	44
Stimulants.....	38	4
Tranquillizers.....	24	7
Barbiturates.....	22	2
LSD.....	31	1
Other psychedelics.....	22	1
Opiates.....	17	1

Source: Whitehead, 1970.

(marihuana user vs. non-user of marihuana) at least trying each drug.

Proposition (8), that frequency of smoking marihuana is correlated with dangerous drug use—is also true. The more that any given individual uses marihuana, the greater is his actuarial chance of using a wide range of dangerous drugs. As with proposition (7), this generalization has received overwhelming empirical support. The 1971 survey conducted by Columbia University's School of Public Health of a national household sample of youths age 12–17 uncovered the relationship in question.

As one looks from non-users through experimenters, to occasional users, on up to frequent users, of marihuana, the likelihood of the use of all dangerous drugs increases. Only 1% of the non-users of marihuana had tried three or more of the five drugs asked about—LSD, heroin, glue, barbiturates, and amphetamines. This was 6% for marihuana experimenters, but 51% for "regular" users (occasionals and frequent combined).

The jump in dangerous drug use from the non-user to the regular user (defined by 10 or more episodes of use) of marihuana was 12 times for heroin (from 1% to 12%), 55 times for LSD (from 1% to 55%), 12 times for glue (from 3% to 37%), 71 times for barbiturates (from 1% to 71%), and 74 times for the amphetamines (from 1% to 74%). Using marihuana, especially if more than a few times, increases one's statistical chances of experimenting with and using a wide range of illegal drugs. The more that one uses marihuana, the greater is this statistical likelihood (Josephson et al., 1971).

Exactly the same generalization was found in a 10% random sample survey of the University of California at Los Angeles, by two physicians, Hochman and Brill (1972). They found that heavy, or "chronic," marihuana users were con-

siderably more likely to try and use *all* dangerous drugs than was true of the occasional user. With all drugs, likewise, this increase was statistically significant, in fact, remarkably so.

Table 8, distinguishes between three levels of marihuana use—*non-use* (defined as less than 10 times in the past year, which obviously includes complete abstainers and very sporadic users as well), occasional use (a minimum of 10 times in the past year up to a maximum of two times per week for up to three years), and chronic use (three times a week or more for two years or more). For every drug, the occasional user was more likely to have tried it than was the non-user; the chronic user, in turn, was more likely to have tried any and all drugs than was true of the occasional user.

A survey conducted among the students of a "human relations" class at the University of California at Los Angeles by William McGlothlin (McGlothlin et al., 1970) investigated the relationship between the use of marihuana and the use of other drugs. All forms of drug use rose as the use of marihuana rose; this held true for men and women separately. Among men, the proportion ever trying heroin, for those using marihuana fewer than ten times in their lives, was only 1%; among less than weekly marihuana smokers, this was 2%; and among weekly or more marihuana users, the figure was 10%. (Among women, no one had tried heroin, even among the weekly or more marihuana smokers.)

The figures among men for those ever trying LSD were: 2% for the infrequent and non-users, 17% for the moderate, or less than weekly, users, and 72% for the regular, or more than weekly, marihuana smokers. This tendency also held for opium, morphine, and cocaine, and it also held for the current use of tobacco and alcohol. As marihuana use rose, the likelihood that the individual

Table 8.—PERCENT TRYING VARIOUS DRUGS BY MARIHUANA USE

	Nonuser of marihuana	Occasional user of marihuana	Chronic user of marihuana
Amphetamines...	5	42	76
Barbiturates.....	4	25	48
Cocaine.....	0	8	17
DMT or DET.....	0	5	11
Heroin.....	0	3	5
LSD.....	1	29	57
Mescaline.....	1	31	64
Opium.....	0	15	44
Psilocybin.....	0	8	21

Source: Hochman and Brill, 1971.

Table 9.—PERCENT TRYING VARIOUS DRUGS BY MARIHUANA USE

	Marihuana involvement			
	Never used	Stopped using	Less than once per week	Once per week or more
LSD.....	1	12	34	67
Methedrine.....	1	7	16	43
Heroin.....	1	2	5	15

Source: Russell, 1970.

was a smoker of ordinary tobacco cigarettes also rose—as well as the likelihood that he or she drank more than two alcoholic drinks per day.

A survey of the students in grades eight through 13 in six schools in British Columbia, with a total number in the sample of over 3,000, turned up precisely the same generalization (Russell, 1970). Only 44% of those who had tried marihuana were "marihuana only" drug users. The use of LSD, methedrine, and heroin, increased as marihuana use increased. Table 9 above specifies this relationship.

In two studies Goode found (1969a, 1971d) that this same fundamental generalization is valid. The variable most powerful in predicting whether any given individual marihuana user would try or use another illegal drug was how much he used marihuana. Nearly all (or 92%) of the daily marihuana smokers in his 1967 study had experimented with three additional drugs or more, but this was true of only one user in 10 (or 9%) who smoked marihuana less than monthly (1969a).

The association between marihuana and the use of other drugs was remarkably strong. The association held up for every drug. The heavy, or daily, marihuana smoker was not quite 10 times as likely to try or use heroin (34%) as was true of the sporadic, or less than monthly user (4%). The heavy user was just under four times as likely to try LSD (82%) as the less than monthly user was (22%). For every drug, there was a linear and step-wise pattern of use according to how much the respondent used marihuana. The greater the marihuana use, the greater the likelihood of trying or using any and all illegal drugs. This same basic association held true for an informally-gathered "snowball" sample of a broad cross-section of marihuana users (Goode, 1969a, 1970), as well as for the students attending a course in "deviance and delinquency" at a state supported East coast university (Table 10, Goode, 1971d).

A study of California college students corroborated this basic finding. "Use of other drugs is

Table 10.—PERCENT TRYING VARIOUS DRUGS BY MARIHUANA USE

	Amphet- amines	LSD	Barbiturates	Opium	Cocaine	Heroin	Methedrine
3 times per week or more...	61	65	44	28	29	14	28
3 times per month to 2 times per week.....	46	32	15	12	4	3	8
At least once.....	19	7	4	2	3	1	6
Never.....	5	1	2	1	0	0	0

Source: Goode, 1971d.

clearly related to frequency of marihuana use. . . . Most of the subjects who had tried other drugs were using marihuana either weekly or daily rather than less often. One hundred percent of the daily marihuana users and 84% of the weekly marihuana users had tried other drugs, in contrast to only 22% of the monthly marihuana users, 18% of the less frequent users, 20% of ones who had experimented, and 0% of the subjects who had never tried marihuana" (Crumpton, in Brill, 1971). In fact, so marked was this tendency for amount of use and the use of other drugs to correlate, that in a variety of ways, "the infrequent marihuana user appears to be more like the non-user or the experimenter than he is like the frequent user." Another study conducted by several psychiatrists comparing twelve "heavy" (i.e., daily) users of marihuana with twelve "casual" (weekly or less) users, comparable in a wide range of ways, discovered this basic finding. Of the many differences in behavior between these two groups, perhaps multiple drug use was the most marked. Only two of the casual users had ever tried any of the hallucinogenic drugs, "and their combined experience totalled four occasions" (Mirin, et al., 1971). In contrast, all of the heavy users had tried hallucinogens, and almost half had taken one or more such drugs 25 times or more; in addition, 11 out of the 12 had tried amphetamines, and seven took it more than occasionally. The authors of this report conclude that: "the motivation and sequelae of marihuana use may be very different for those who use the drug on an occasional basis than for those who are frequently intoxicated."

Proposition (9), that the use of marihuana and the use of dangerous drugs, particularly heroin, are increasing together, is probably true, although the data supporting this view are not as valid as those supporting some of the other contentions. The figures on marihuana use in colleges indicate a rise in marihuana experimentation from spring 1967, when only 6% of a sample of American college students had tried marihuana (American Institute of Public Opinion, 1967), to spring 1969,

when it rose to 22% (American Institute of Public Opinion, 1969), to spring 1970, when it was 31% (Groves, 1970), to December 1970, when it was 42% (George Gallup, 1971).

However, almost no comparable figures exist for heroin use, or for non-college marihuana use. Estimates place the number of heroin addicts just after the Second World War at approximately 20,000; an estimate ending with the close of 1967 placed this figure at something over 100,000 (Ball, Englander and Chambers, 1970). A common current estimate of the total number of narcotic addicts in the U.S. is on the order of a quarter of a million—but this could be considerably wide of the mark. One recent estimate, the product of a survey of available information, put the number of heroin addicts in New York City (commonly believed to contain half of America's narcotic addicts) at between 70,000 and 100,000 (Singer, 1971). The fact is, all such estimates are based more on speculation than on hard undisputable fact.

But few doubt that both marihuana use and heroin addiction are rising together, that both are increasing over time in number.

The same pattern has been observed over the past few years in Great Britain (Wade, 1969). In Britain, the number of registered addicts is increasing in a markedly similar pattern to the number of cannabis offenses. Since the middle 1950's, a graph plotting these two figures would look almost like a single line. There is, of course, a problem with reasoning from the known, official, figures, to the unknown, "actual," figures, a process which may lead to erroneous conclusions.

With both the number of addicts and the number of marihuana users, those who come to official attention represent but the tip of an iceberg—although the hidden segment is probably considerably larger for marihuana users than for heroin addicts, especially in England. At the same time, it would appear to be a safe bet that the unknown segment is increasing as the known segment increases. It would be difficult to deny that both marihuana use and heroin addiction, as well as, probably, the use of nearly all dangerous drugs,

has been increasing in the past few years. This includes LSD, which most observers feel has declined in recent years.

One study of Toronto school children indicated that the use of LSD had tripled between 1968 and 1970 (Smart et al., 1971). In three American Institute of Public Opinion surveys, done in 1967, 1969, and 1970, the percentage of American college students who have tried LSD went from 1% to 4%, to 14 percent at the latest date (American Institute of Public Opinion, 1967, 1969; George Gallup, 1971). These figures probably represent a broader trend toward increasing use of dangerous drugs in America, a trend which parallels the use of marihuana.

Proposition (10), that if marihuana and its use could be eliminated or decreased, the use of other dangerous drugs, including heroin, would drop etc. is presented as a rhetorical argument which cannot be tested empirically. Therefore, no statement regarding its validity can be made.

Proposition (11), that the buying and selling of marihuana is related to the frequency of marihuana use, and the use of other dangerous drugs needs further explication.

The question of how marihuana is distributed, bought and sold, is of immense importance for the "stepping stone" hypothesis. One version of the causal thrust behind the progression from marihuana to heroin and other dangerous drugs is that, since marihuana is illegal, it is necessary to resort to underworld purchases from criminals, who also sell heroin in addition to marihuana, to obtain one's marihuana supply.

By transacting with, and making friends with, the marihuana "dealer" (the most commonly-used term for the drug seller among users), one's values and attitudes toward drugs and drug-taking, will be influenced in the direction of an increased willingness to try and use a wide range of drugs. Moreover, one's dealer, offering as he does a pharmacological feast, provides opportunities to use other drugs.

Thus, through the association with one's dealer, the marihuana user can become a heroin addict—because both drugs are sold in the shadowy realm of the criminal underworld.

In recent years, an enormous quantity of information on drug dealing has become available—which was not true previously. Some of this material is journalistic and anecdotal (Kentfield, 1970; Kimball, 1970; Wayne King, 1971a, 1971b; Kohn, 1969a, 1969b; McNeill, 1966; Baldwin, 1969. Some of it was written by dealers from a first-hand perspective (Anonymous, in Goode, 1969b; Anonymous, in Simmons, 1967; "Ric,"

1967; "San Diego Door," 1968; Anonymous, in *The New York Times*, 1968; Tichborn, 1970). Some of these accounts are more systematic, and were written by sociologists investigating the social and economic structure of dealing (Carey, 1968; Mandel, in Simmons, 1967; Goode, 1969b, 1970, 1971b; Blum, 1971; Johnson, 1972).

A few accounts have concentrated on the economic aspect of dealing as an activity and an enterprise (Kramer, 1971; Nisbet and Vakil, 1971). A statement by a customs official (Ambrose, 1971) will provide useful information on distribution from the importation segment of these transactions. In addition, a virtual miniature library of "how to grow marihuana" has emerged in the past few years, some of them selling many thousands of copies, and being reprinted in several editions and printings, indicating the proliferation and importance of the factor of growing one's own marihuana (Drake, 1970; Morier, 1967; Fleming, 1970; "Mary Jane Superweed," 1968, 1969; Barbour, 1967; Anonymous, 1968).

Thus, although much of the information we have on marihuana distribution is impressionistic, and there are gaps in our knowledge, what is now known is sufficiently reliable and valid for us to be able to piece together a reasonably accurate picture of the marihuana market, of the reality of buying and selling marihuana.

If it is an attempt to explain the potential progression of the typical marihuana user to more dangerous drugs, the "dealer" theory is invalid. At the same time, this theory does help to explain the drug progression of some users; which ones will be explained shortly. It must be kept in mind that not all marihuana users even buy the drug. Whether they do or not depends on a wide range of factors, the most important of which is how often they use marihuana.

In one survey (1970), Goode asked: "Have you ever bought marihuana?" A clear majority of the total sample had done so at least once. But among occasional, or less than monthly, marihuana smokers, only 29% had *ever* bought marihuana. When they used the drug, it was typically in a situation in which they were offered marihuana by a friend, in a social setting; they were almost always given an opportunity to use the drug during that occasion, and very rarely were given a quantity of the drug to keep. They did not develop, or had not developed, a level of use which necessitated marihuana purchasing. They were dependent on others giving them the drug in social situations, as the occasions arose.

Only one user in 10 (or 11%) answered "yes" to the question, "Do you generally keep a supply

of marihuana around your house?" Thus, the typical occasional marihuana user does not even buy the drug, and does not come into contact with any "criminal underworld," at least not as a consequence of marihuana purchases.

As to what proportion of all marihuana users grow their own "grass," and what proportion relies mainly on what they grow, is impossible to estimate accurately at this point. In Goode's study, conducted during the spring and summer of 1967, six out of the 204 interviewees spontaneously mentioned that they were, at the time of the interview, actually growing their own marihuana. However, this activity is certainly more common today than it was in 1967, and far more marihuana is grown by a user outside of New York City than within it.

The recent efforts of the United States government ("Operation Intercept" and "Operation Cooperation") in halting marihuana importation have unquestionably stimulated an increase in growing one's own marihuana. (A full page advertisement in the July 29, 1971 issue of *The Village Voice*, a liberal New York weekly, announced "Dynamite Dirt" for growing one's own marihuana—at \$3 a bag—"available at local florists.") Goode estimates that more than 1%, and possibly as much as 5%, of all the marihuana consumed in America comes from plants which were grown by the user. Another source is "home grown" marihuana—naturally growing and harvested in rural areas.

Marihuana is an extremely hardy weed, and grows in almost all of the nations of the world, and all of the states of the United States (Haney and Bazzaz, 1970; Schultes, 1970). Possibly as much as 10%, and probably over 5%, of all marihuana smoked in the U.S. stems from "home grown" products.

The point is, with both growing one's own and "home grown" marihuana, a certain proportion of all users need not purchase their supply from a "criminal"—or, indeed, from anyone. Unlike all drugs in common use, marihuana grows in the wild, and can be obtained "naturally." At the same time, two considerations must be remembered: (1) a minority of all the marihuana consumed in America comes from these two sources; (2) native marihuana tends to be significantly weaker in THC content than is true of imported varieties.

The more that a given marihuana user smokes the drug, the greater is the likelihood that he will purchase it. At the same time, the typical user does not buy marihuana from a full-time professional criminal; he buys it from a friend. Developing a friendship relationship with a dealer who was not previously a friend is far less common

than developing a buyer-seller relationship with a friend.

The higher up on the distribution ladder, the greater is the proportion of profit, and the greater that profit plays a major motivating factor in selling, and the greater the likelihood that the seller will both be engaged in the activity of dealing full-time, as well as selling other drugs.

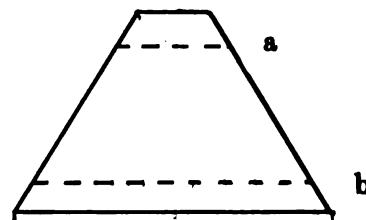
On the other hand, at the level next to the customer—which typically involves buying an ounce of marihuana from someone who originally bought a pound from a dealer higher up—the user does not characteristically buy from someone who is involved in dealing as a full-time career, as a sole means of support. The customer-level marihuana dealer, selling in ounces, very rarely sells other drugs on anything like a routine basis—with the possible exception of psychedelic drugs. The dealer from whom the ounce seller obtained his pound is very likely also to deal in dangerous drugs. The diagram below schematizes this relationship. At point b, the seller to customer level, obviously a much larger number of transactions take place than at point a, which represents the point at which large high-volume dealers sell to middle-level dealers for profit. Thus, because of the considerably larger number of transactions taking place at point b, it could be called the "typical" transaction point. Here, dangerous drugs other than marihuana rarely exchange hands.

A survey of about 5% of the student body of the University of California at Los Angeles, randomly selected, conducted in 1970, explored various aspects of marihuana use and sale (Nisbet and Vakil, 1971).

Not quite half, or 47%, said that they had tried marihuana once or more in their lives. The marihuana users were asked where they generally obtained the marihuana they used. Most of the sample of users (or 58%) were non-purchasers—they were offered the drug, on occasions of use, by their friends.

About 40% said that they got it both from their friends, and in addition, obtained some from purchases they made. Less than 1% said that they grew their own, and about 1% said that they only obtained marihuana via purchasing it.

As the authors of this study state, "in sharp



contrast to alcohol and cigarettes, which are frequently obtained and consumed by individuals alone, marihuana has a group or communal feature to it. Findings suggest that nearly 98% claimed to obtain (and consume) either all or a part of their marihuana from friends" (Nisbet and Vakil, 1971). Whenever marihuana is smoked, it is a communal activity; it is very rarely consumed alone. In Goode's survey (1970), not quite half of the sample (45%) said that they had never smoked marihuana alone, and only a tiny minority (5%) said that they smoked most of the time alone.

Thus, whenever the drug is used, it is passed around communally—and thus, nearly all users will have "obtained" some of what they use from friends, without paying for it. We should not be surprised by this. But what is surprising is the size of the non-purchasing group. Goode's study was weighted in the direction of heavier users, and so the proportion buying marihuana would not be descriptively accurate. But that a majority of users in a representative study would not purchase is surprising—and indicative of how the market works.

In Goode's study, the distinction between the user and the seller was difficult to make. To put it another way, the seller is not a distinct social being; selling marihuana is a fairly accurate indicator of one's involvement with marihuana and its use. The more that one actually smokes marihuana, the more friends that one has who use and greater is the likelihood of selling oneself.

Just under half of his respondents have sold marihuana at least once, or 44% (Goode, 1969b, 1970). Nearly all (96%) of the *daily* users had sold at least once, whereas only one less than monthly user in 10 (or 11%) had ever sold marihuana. When asked what quantities they generally sold; and when they did; the median amount sold per transaction was two ounces. Only one user in five had ever sold 50 times or more. It should be clear, then, that selling transactions take place at many levels of use and distribution. Many users sell—largely to one another. High-volume, profit-oriented dealing, associated with the selling of dangerous drugs, does indeed take place, and selling of this type supplies the bulk of the marihuana consumed in this country. But whereas a dozen or so such transactions can supply thousands of users, this volume is continually broken down and re-sold, each time to less and less involved users, to smaller and smaller sellers, and is sold increasingly within a context of friendships rather than on a strictly commercial basis.

A few transactions at the top become thousands of transactions near the bottom. Thus, the average

user never has any contact with a professional multi-drug dealing world, even though what he consumes probably originated from there. Selling takes place at the customer level between intimates, involves little profit, very rarely involves other drugs, involves relatively small quantities of the drug, an ounce or two being typical, and takes place relatively infrequently.

The fact that one individual sells and the other buys is a fairly good indicator that the seller is somewhat more involved with the drug and its subculture, probably uses more, has more friends who use and sell, and has more information about the market and higher-level sellers. At this level, the selling of dangerous drugs is unlikely to take place, at least on a routine basis. One step or two up from this level, dangerous drugs are sold.

Whether or not a given user does come into contact with the dangerous-drug dealing world is influenced by very distinct social forces—one being his own involvement with the drug, and the other being his own involvement with selling as an enterprise.

The user-buyer rarely comes into contact with the world of dangerous drug selling. The user-buyer-seller, on the other hand, may very well; this point is so crucial that it will be necessary to return to it in a later discussion.²

Marihuana use and the use of other drugs are statistically associated in a number of different ways. However, a statistical association does not demonstrate a causal relationship. Showing that two phenomena or forms of behavior are associated in a statistical sense is only the first step. Showing that they are causally associated is a much more difficult task. Two variables may be associated in a simple descriptive sense, but not causally.

The statistical literature is replete with absurd and meaningless associations. The popular book, *How to Lie With Statistics* (Huff, 1954) was organized around just such a fallacious view—that association indicates causality. So crucial is the next proposition—that marihuana is necessary and instrumental in "causing" the use of other dangerous drugs that it requires a detailed analysis.

The next *proposition* (12) deals with the critical hypothesis that marihuana use and the use of dangerous drugs (including heroin addiction) are causally related. Theories dealing with this proposition are individually dealt with in the following discussion.

² It should be pointed out that this discussion may not apply to drug selling in the ghetto. No recent adequate study of marihuana distribution, and its relationship with the selling of dangerous drugs, has been done in the urban slum; most involve college and middle-class users.

CAUSAL EXPLANATIONS FOR MARIHUANA ESCALATION

It would be impossible for any impartial observer to maintain that there is no relationship, or a random relationship, between marihuana use and the use of dangerous drugs, that the marihuana user is equally as likely to try and use any given dangerous drugs as is true of the non-user of marihuana.

What scientists call the "null hypothesis" would have to be roundly rejected. There is some kind of a relationship, the relationship is positive, it is significant, and it is powerful. There should be fairly wide-spread agreement on this basic fact.

The major source of disagreement is over what the facts mean. There are at least four different, and to some degree contradictory, explanations, or theories, as to the cause or causes of this relationship. Why the statistical relationship between marihuana and dangerous drug use? And why does it take the form that it takes?

Simple Biochemical Theory

The first, and most classic, explanation for drug escalation is what might be called the simple biochemical theory. This explanation, expounded by the Federal Bureau of Narcotics since the early 1950's, holds that it is the experience of the marihuana intoxication itself that provides the dynamic force underlying drug progression. The "simple biochemical" theory has two variants. One is that being "high" or under the influence of marihuana provides an introduction to the drug experience, thus stimulating a "thirst" in the young impressionable marihuana user for a bigger and better "thrill," or "kick." The former director of the Bureau of Narcotics and Dangerous Drugs, Henry Giordano (1968b) has written: "The evidence is strong that the use of marihuana develops a taste for drug intoxication which, in turn, leads many people to the use of more potent drugs—even heroin."

The second variant of the "simple biochemical" theory is the tolerance-disillusionment explanation. This holds that initial experimentation with marihuana leads to ever-greater involvement with the drug. This in turn leads to diminishing effects, because of marihuana tolerance. Eventually the marihuana user will find the experience of becoming intoxicated on his drug of choice banal and unexciting, and hence, he must turn to more powerful drugs to achieve the "high" he initially felt, and can no longer achieve, with marihuana.

The image projected by both variations of the "simple biochemical" explanation is that of a conveyor belt. Not getting on the conveyor belt means

never using heroin or any other dangerous drug; getting on it means increasing one's chances enormously of moving in that direction.

Some individuals who do get on (that is, smoke marihuana) will, for one reason or another, drop off before getting all the way to serious involvement with dangerous drugs—ultimately, heroin addiction. What is emphasized in this stepping stone theory is the constancy and uniformity of the marihuana-dangerous drugs relationship. Heroin addiction is merely a later stage of a process which began with marihuana use.

The "simple biochemical" theory of drug progression would hold that X number of marihuana users would eventually translate into Y number of heroin addicts or abusers of dangerous drugs. Thus, 100,000 marihuana smokers would eventually produce (let us say) 10,000 heroin addicts, a million marihuana smokers would eventually produce 100,000 addicts—and 10 million marihuana smokers would eventually produce a million addicts.

This theory also dominates the view that easy availability of marihuana would eventually and inevitably produce a greater number of heroin addicts, because more people will be smoking marihuana. According to this view, marihuana use is the single most important reason for the rate and volume of heroin addicts, and that no other factors seriously mitigate this process.

Free access to marihuana will produce an enlarged version of that which exists today—more marihuana users, and consequently, more heroin addicts. No other process can explain the escalation process; we cannot wipe away the fact that a certain fairly high proportion of marihuana users will eventually become abusers of dangerous drugs. The most important single factor to attack in heroin addiction is the prior process of marihuana use. Such are the views of those who advocate the "simple biochemical" or classic stepping stone theory.

Sophisticated Biochemical Model

A second theory, approach, or explanation, for drug escalation from marihuana to more dangerous drugs, is what might be called the sophisticated biochemical model. This theory would adhere to the one just presented, except that a number of other factors may mitigate or alter somewhat the basic relationship between marihuana use and the use of dangerous drugs. In other words, marihuana use does not inevitably lead to the use of dangerous drugs, and there is no simple one-to-one relationship between the two, but that essentially and basically, marihuana contributes power-

fully to the escalation process, and that any other outside additional factors would merely alter somewhat a relationship which would naturally be an unambiguous one. Marihuana use typically impels the user toward dangerous drug use, but extenuating factors can diminish or strengthen the progression process significantly.

Personality Abnormality Model

A third theory explaining progression from marihuana to heroin is the personality abnormality model—that only (or principally) among the psychologically inadequate does the progression take place; among the psychiatrically sound and healthy, marihuana does not necessarily “lead to” experimentation with, and addiction to, hard drugs.

To put it another way, the greater the psychiatric problem of the individual, the greater the likelihood of a drug escalation. Experimenting with marihuana may be the sign of a minor, or even possibly no, psychological problem; becoming seriously involved with marihuana may be the sign of a serious problem.

Experimenting with, and eventually becoming seriously involved with dangerous drugs such as heroin, LSD, and methedrine is almost certainly a sign of something almost desperately wrong with the individual’s psyche. Individuals with a severe problem will not find marihuana a sufficient “solution” to their problem. They will, therefore, “shop around” for some drug that will “answer” or mask their psychiatric difficulties.

This theory would hold, both marihuana use (to a minor degree) and dangerous drug abuse (to a much greater degree) are external manifestations of an internal turmoil. In fact, it is a kind of “dead end” search which leads to discarding that particular solution, and searching about for another one. In the search, the marihuana user will almost inevitably make social acquaintances which will facilitate the process. Which leads us into the fourth theory of drug escalation.

Sociocultural Model

The fourth theory or explanation for the marihuana to dangerous drugs process is the social, or subcultural model. This position would hold that marihuana use *per se* has little to do with why some users “go on” to the use of more dangerous drugs. The answer lies almost entirely within the nature of social relationships in which users may (or may not) engage themselves within the course of using drugs.

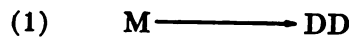
Drug use is not simply ingesting a chemical.

It always and inevitably entails making and sustaining social interactions and relationships in the process, and these relationships are always distinctive. Making drug-related friendships means making friendships of a particular type which also will influence one’s further behavior, particularly in relation to drug use. Furthermore, these social relationships are variable, and not constant.

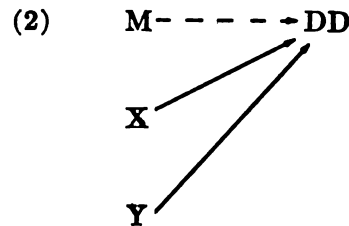
Within certain social and cultural milieus, the marihuana-to-heroin escalation may exist—because of the nature of the group or groups using these drugs. Within other settings, the escalation may be almost totally lacking, because using marihuana simply does not entail making friendships or relationships which have anything to do with the use of dangerous drugs.

The escalation process (where and when it does occur) does not come about as a result of anything intrinsic to the drugs themselves, to marihuana itself, to the experience of becoming “high,” but relates to the nature of the personal associations one makes in the course of using drugs.

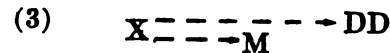
The “simple biochemical” theory could best be symbolized by the following diagram:



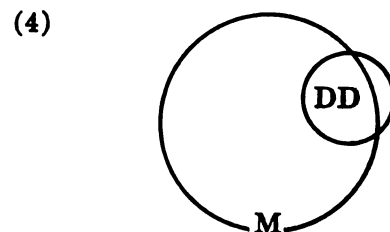
The “sophisticated” biochemical theory would look like this:



And the “personality abnormality” theory of drugs escalation would best be diagrammed as follows:



The social and cultural theory of the marihuana to dangerous drugs process would be represented by the following diagram:



What evidence do we have to support or refute these various models, theories, and explanations?

The "simple biochemical" theory is easiest to disprove. The following indisputable facts render this explanation of marihuana escalation completely invalid: (1) the enormous subgroup and regional and demographic variation in whether or not escalation takes place, as well as which drugs marihuana users escalate to—if and when escalation does take place; (2) the fact that frequent and heavily involved marihuana smokers tend to enjoy the marihuana intoxication most, rather than least, as the stepping stone theory would predict, and a disenchantment process does not appear to occur in the typical case; (3) it is the frequent marihuana smoker who also tends to use other drugs most, and a discontinuation of marihuana use does not characteristically occur (with the exception of the case of heroin addiction) when other dangerous drugs are used regularly; (4) the differential experimentation with, and use of, dangerous drugs is far more heavily influenced by location in the marihuana subculture and interaction network than by the actual use of marihuana. Point (4) also refutes the "sophisticated biochemical" explanation, and requires elaboration.

Goode's multiple drug use study (1969b), found that there was a remarkable "concatenance of many factors relating to marihuana use," and that a given user's likelihood of experimenting with more dangerous drugs was an outgrowth of his involvement with and in a drug-using subculture far more than the simple fact of his using marihuana. The greater the proportion of marihuana-using friends an individual user had (which was itself highly correlated with frequency of smoking marihuana), the greater was the likelihood of using other drugs. For instance, about two-thirds (or 64%) of these respondents who had more than 60% of their friends using marihuana had tried LSD, but only a quarter (or 26%) of those respondents who had less than 30% of their friends using marihuana had tried LSD.

The greater the proportion and number of marihuana-using friends that one had, the greater was one's likelihood of trying and using other dangerous drugs. The kind of friends (itself a social and cultural variable) influenced very powerfully one's own use of dangerous drugs.

Marihuana use, and particularly heavy marihuana use, implicates one in a web of friendship and social relations with other drug users. The more that one uses marihuana, the more extensive and more intense that one's involvement with a drug-using subculture is likely to be, and the

more one's values and behavior tend to become similar to those of one's companions.

Heavy marihuana use can be seen as an index of one's own involvement with the drug subculture with a community of fellow drug users. The more that one uses marihuana, the more favorable will be the views of one's friends toward using drugs other than marihuana—and in addition to marihuana. The more that one uses marihuana, the greater the likelihood that he will become involved in selling marihuana. The more that one knows about the workings of the marihuana market, the greater the opportunities for trying and using other dangerous drugs (Goode, 1969c).

It is not marihuana use, in and of itself, which "leads to" the use of dangerous drugs, but also the social and cultural milieu in which marihuana use takes place, that provide the dynamics leading to this association.

These relationships were explored in considerable detail by Sociologist Bruce Johnson in a study conducted in 1970 of 3,500 students attending colleges in the New York metropolitan area. He empirically demonstrated the crucial role of the user's location in the social network of the drug subculture as a determinant of dangerous drug use.

Further, he found that marihuana use, in and of itself, does not determine the use of dangerous drugs.

Johnson divided his sample into four levels of marihuana use—(1) nonusers, or abstainers; (2) experimental marihuana users (less than monthly in the past six months); (3) moderate users (those who smoked marihuana monthly or more, but less than weekly); (4) regular users—who presently use weekly or more. The outcome, or dependent variable, was designated the use of heroin. Fundamentally, the same relationships were found with the use of other dangerous drugs.

Johnson found, as have other researchers, a positive, significant, strong, and linear relationship between frequency of marihuana use and the use of heroin. Almost no marihuana abstainers (or less than 1%) had ever tried heroin. This increased to about 1% among marihuana users, 5% among moderate users, and 17% among regular, or weekly, marihuana users. The same held true for the use of all dangerous drugs—hallucinogens (including LSD), amphetamines, barbiturates and other sedatives, methedrine, and cocaine. For instance, less than 1% of the marihuana abstainers had tried any of the psychedelic drugs, 8% of the experimenters had done so, 32% of the moderate users, and 68% of the regular users of marihuana had tried one or more of the hallucinogenic drugs.

Johnson concludes that "the more frequent the use of marihuana, the greater the likelihood of

sing any and all of the other dangerous drugs."

However, for Johnson, this is only a first step. What variables influence this relationship? Why the association between frequency of marihuana smoking and the use of dangerous drugs? A crucial explanatory variable in Johnson's study is differential exposure to heroin-using friends.

There is, of course, a positive correlation between the use of marihuana and having at least one intimate heroin-using friend. But by holding marihuana use constant, Johnson was able to test the relative strength of these two variables—frequency of use and having heroin-using friends. Almost none of the marihuana abstainers had tried heroin, whether they had heroin-using friends or not.

But among experimental (or less than monthly) marihuana smokers, 5% of those with at least one heroin-using friend had ever tried heroin themselves. This was true of only one-half of 1% of those marihuana experimenters with no heroin-using friends. Among regular (weekly or more) marihuana users, only 5% of those without heroin-using friends had tried heroin. But almost half (45%) of the regular users with at least one intimate heroin-using friend had tried heroin. As we move from experimental to regular use of marihuana, the concomitant use of heroin rises only slightly, when the variable, heroin-using friends is controlled.

However, as we move from not having to having heroin-using friends, holding constant, frequency of marihuana use, the likelihood of using heroin rises markedly. It is obvious that having heroin-using friends is far more potent in influencing heroin experimentation than is level of use of marihuana. Even the regular use of marihuana does not "lead to" the use of heroin in the absence of making friends who use heroin.

What variables influence making friends with those who use heroin? The issue then becomes one of trying to decide whether it is the use of cannabis which leads one to develop friendships with heroin users, or whether there is some other process of involvement in the drug subculture. James Carey (1968) attributes to buying and selling a potent independent influence in the drug subculture.

Johnson explored the role of buying and selling drugs in gaining heroin-using friends. He found that involvement in the illegal buying and selling of drugs was the single most potent variable determining whether or not one had heroin-using friends.

The relationship between marihuana use and having intimate heroin-using friends was greatly decreased when buying and selling drugs was introduced. Among respondents who have only

bought marihuana, 4% of the experimental users and 8% of the regular users, had at least one heroin-using friend—a tiny increase, obviously. Among those who both bought and sold both marihuana as well as other drugs, however, a quarter (25%) of the experimental users of marihuana, and a third (36%) of the regular users had intimate heroin-using friends. The jumps from 4% to 8% and from 25% to 36% are fairly small, but the jumps from 4% to 25% and from 8% to 36% are considerably greater.

It should be clear that involvement in selling drugs is unquestionably more potent and influential in having heroin-using friends, and hence using heroin, than is the factor of frequency of use of marihuana. The original correlation between frequency of use and the use of other dangerous drugs is largely due to involvement in selling illegal drugs, and not use itself. Only buying marihuana did not influence the relationship very much at all, but selling, and especially selling a variety of other drugs, did influence the relationship, and powerfully. Thus, the causal link between marihuana use and the use of dangerous drugs does not appear to be the use of marihuana at all. Rather the use of marihuana is merely an external manifestation of something which goes deeper—involvement with and in a drug-using subculture, especially buying and selling illegal drugs, and having friends who use other dangerous drugs.

These data do not answer the question of whether or not psychiatric abnormality plays a role in the escalation process. If psychological factors alone are determinative, then quite clearly the independent role of marihuana is inconsequential. If heroin addiction as well as the heavy involvement with (or "abuse" of) other dangerous drugs answers a deep psychic need for oblivion, degradation or escape, then marihuana is merely an easily available drug which presents itself at a relatively early age, and is eventually discarded as a "solution" for the mental aberration of the user.

Consequently, if the personality abnormality explanation (again, alone) were valid, then the role of marihuana would actually be a "digression," to adopt Joyce's (1971) phrase—marihuana actually serves to slow down the progress to heroin, delays addiction by a few years, rather than facilitates it (Kaplan, 1970).

If anything, the psychiatric abnormality model discounts marihuana's independent role in the escalation process. This is not to say that it is invalid, but it must be pointed out that in order to make any sense at all, it must always be linked to subcultural and sociological factors and variables.

Two factors account for the greater use of dan-

gerous drugs among marihuana users in comparison with nonusers. The first is a selective recruitment process; the second is a selective interaction and socialization process.

The selective recruitment process largely explains why young drinkers of alcohol and smokers of ordinary tobacco cigarettes are more likely to "go on" to the use of marihuana and dangerous drugs. This is the same reason why marihuana users are more likely to engage in premarital sex, to engage themselves in liberal politics more, and so on. It also explains (for instance) why such an apparently anomalous and peculiar fact that coffee drinkers should be more likely to use marihuana and dangerous drugs (Blum, 1969) than is true of those who do not drink coffee. It is simply because almost no social group or category, almost no participants in any activity, form a random selection of all individuals.

Almost nothing is equally participated in by everyone. We will observe differences in participants versus nonparticipants of any activity in a wide range of ways—not because that activity necessarily has anything to do with these differences, but because the people who take part in them are different in a wide range of ways. Knowing this fundamental fact will insulate us from making absurd causal inferences.

What about the correlation between using marihuana and using dangerous drugs? Is a true casual relationship at work here? One assumption built into the stepping-stone hypothesis is that legal drugs do not play a part in the escalation process, that the role of marihuana is to some degree unique.

Blum's data (1969) shows quite clearly that the correlation between marihuana use and the use of other dangerous drugs is matched by a similar correlation between substances we accept, and the use of dangerous drugs. The statistical correlation between marihuana and the opiates, for instance, was .24—significant and fairly strong. But the

correlation between tobacco and marihuana was higher (.31), and that between sedatives and opiates was also higher (.25), and between marihuana and alcohol was almost as high (.22).

Correlation between alcohol and the amphetamines was slightly below that for marihuana and alcohol (.19), and that between tobacco and the amphetamines only slightly below that (.17). The highest correlation of all was between marihuana and the use of hallucinogens, such as LSD (.55)—a drug, typically, of extremely sporadic use.

The New York State Narcotic Addiction Control's study demonstrated, as pointed out earlier that the regular use of marihuana is correlated with the regular use of a wide range of dangerous drugs. Does this fact confirm the escalation hypothesis? Not if we see as basic to drug progression the feature that no factors other than marihuana use significantly determine or are related to using other drugs. After all, the use of various dangerous drugs are related to one another—whether these drugs were obtained legally or illegally.

Table 11 below shows the percentage of the regular users of various drugs who are also regular users of various other drugs. It should be noted in Table 11 that below the titles of each drug on the horizontal is the percentage of all New York state residents in the sample who are regular users of each drug. We can then compare the sample's use with that of the users of each other drug.

The regular use of all drugs increases the likelihood of using all other drugs. For instance, using barbiturates increases by approximately 10 times the likelihood of using "pep pills," heroin, LSD, and methedrine, and increases by about five times the chance of using marihuana. Using diet pills (almost all administered by legal prescription) increases by two times using barbiturates, 15 times using pep pills, five times using heroin, and about 15 times using LSD and methedrine. The use of all drugs is correlated with the use of all other

Table 11.—REGULAR USE OF VARIOUS DRUGS

	Barbiturates	Diet pills	"Pep pills"	Marihuana	Heroin	LSD	Methedrine
Percent of sample.....	(2.6)	(1.6)	(0.8)	(3.5)	(0.2)	(0.3)	(0.3)
Barbiturates.....	100	3	7	17	3	4	3
Diet pills.....	5	100	13	16	1	5	5
"Pep pills".....	22	26	100	61	6	11	15
Marihuana.....	13	7	18	100	4	9	7
Heroin.....	34	9	19	53	100	19	19
LSD.....	36	24	29	100	13	100	36
Methedrine.....	26	28	46	91	17	46	100

Source: Chambers, 1971a.

drugs, in a statistical sense, whether they are legal or illegal.

The point is, to claim for marihuana a distinctive and unique role is to ignore many socially approved processes which are precisely parallel. These regularities prevail not because becoming intoxicated on this or that drug "leads to" a bigger and better thrill, but because individuals who use drugs tend to be selectively recruited from segments of the populace which are to some degree different from individuals who do not use drugs, even before drug use takes place. There is to some degree a drug-taking disposition and orientation, just as there is a drug-abstention orientation whether we are discussing licit or illicit drugs.

In understanding the dynamics of any social relationship such as this one, we must be aware of the selective recruitment processes at work. Marihuana use is not equally spread across the population. It is necessary to pay attention to the social and psychological composition of marihuana smokers to remind ourselves that many relationships between marihuana use and almost anything else can be accounted for in part by the fact that marihuana users are simply socially different—with or without marihuana use. We have to hold these differences constant before making any inferences as to the "effects" of the drug.

The second process—that of selective social interaction and socialization—also operates with marihuana use. Not only are marihuana users already different, even before they smoke their first marihuana cigarette, but they also become different by the distinctive social relations and activities they engage in during the course of their marihuana-related activities.

Emphasized, are two such activities and interactions which have special relevance for the escalation process—buying and selling drugs, and making friendships with others who use dangerous drugs. There are certainly other such factors which also play a role here. Throughout this discussion, the intrinsic and supposedly constant, uniform, "effects" of becoming intoxicated on marihuana, the pharmacological action of the drug itself, do not add much explanatory power to the relationship.

All of the variations in escalation observed stem from nonpharmacological sources. As a chemical substance, marihuana, at generally used potency and quantity in the United States, plays no more role in the escalation process than alcohol, amphetamines taken by prescription, or nicotine in cigarettes and cigars. There are powerful parallels between the use of legal and illegal drugs.

At the same time, marihuana's legal status adds

an additional dimension not shared by the legal drugs. Its subterranean status makes its use not simply a question of the selective recruitment into a certain activity by a certain somewhat different segment of society.

Something else is occurring in addition. Its criminal status gives its use, possession, and purchase and sale, an added socializing and subcultural power not evidenced by the possession and use of the legal drugs.

It cannot be overemphasized that a complex of interdependent variables is operating in the area of multi-drug usage which involves psychological, and sociocultural factors. It is likely that with most marihuana users, the phenomenon of usage is more related to social variables than to any psychological or personality factors. It is likely, however, that psychological correlates play a more prominent role among those who are frequent multi-drug users, as well as, those who "escalate" to the status of dependency or addiction with respect to the more dangerous drugs such as barbiturates, alcohol, and heroin.

There are no simple explanations for the combinations of drugs persons choose to use, nor for the fact that different individuals progress to different points along the same dimension. There is a need to better understand the social and psychological framework within which progression occurs; how and in what instances it is self-limiting, as well as, the factors relating to de-escalation or limiting or discontinuation of drug usage.

We need to expand our knowledge and understanding of the relationship between the dynamics of human interaction and the effects of drug usage.

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II. Youth Drug Use Survey

This section includes a survey of high school and college students and was prepared by the following members of the Department of Psychiatry at the University of California, San Diego, School of Medicine: Lewis L. Judd, M.D., Eric Gunderson, Ph. D., G. R. Alexander, M.A., Paul Attewell, B. Sc. Hons., Bruce Buckingham, Eric Blau, Joan Crichton, M.E.D., Arnold J. Mandell, M.D., Judy Schuckit, B.S.

HIGH SCHOOL SURVEY

This survey of drug users among high school students in the San Diego area was begun in May of 1970. The data collection took approximately 2½ months to complete. Four separate high schools in the area were chosen to be surveyed. Each high school was selected because it served a different area of the county and represented somewhat different socio-economic classes in the population that was served.

Prior to the initiation of the survey, several months were spent by the research team in developing a questionnaire which would not only assay in depth quantitative types of information (i.e. frequencies of drug use and abuse, etc.), but one which would also have the capacity to tap qualitative information regarding a wide variety of personal and familial characteristics along with the behaviors and attitudes of the young people selected for the survey. The format and content of the questionnaire developed was quite similar to those utilized by other investigators, but contained certain specific modifications (Blum, 1969, Goode, 1970). Pilot data indicated that it took approximately an hour for the average high school student to complete the ten page questionnaire. (A copy of the questionnaire used in this survey is appended to this report).

After the questionnaire was developed, we approached the central administration of each of the four schools in order to obtain their cooperation in necessitate our having to go through the schools' to share the goals of the study, review the questionnaire, answer any questions and to assure students anonymity as a participant in the study. In each instance we were unable to obtain the cooperation of the school's administration to allow us formal access to their students. It became apparent that we

would have to devise a strategy which would not necessitate our having to go through the schools administrative or teaching faculty.

This was a very challenging methodological problem and a number of approaches were tried, none of which was completely satisfactory nor successful. The method ultimately used is, in our opinion, unique and to our knowledge has not been reported before. We obtained year books from each of the four high schools and selected at random every third student in the tenth and eleventh grades who were listed in the year books. Telephone numbers were obtained from local area phone books for each of the names listed. If more than one surname identical to that of the selected student was listed in the phone book then each name listed was called until contact had been made with the specific student who attended that specific high school. The telephone contacts were made by young college undergraduates, in order to help reduce the natural suspiciousness stimulated by this type of drug use survey and to enhance the subjects identification with the study.

Incidentally, only two students of all those contacted actually refused over the telephone to fill out the questionnaire. Immediately following the contact, a set of instructions, a questionnaire and a stamped addressed return envelope were mailed to the subject. Using this technique the return rate of completed questionnaires was 60%. Therefore, the return rate was higher than that which had been obtained in a number of other survey studies using mailed questionnaires. The students who returned the questionnaires were generally quite conscientious in filling them out since the great majority (over 90%) contained complete and usable data.

As the questionnaires began to return, a coding system was developed and each of the questionnaires was coded in preparation for punching the data onto computer cards. Because of the breadth of information obtained, 23 computer cards were required to record the data for each individual questionnaire. The data was then transferred to a master computer tape and then checked for accuracy against the punched cards. Following this the data was subjected to simple statistical analyses which searched for significant interactions between qualitatively and quantitatively different patterns of drug use and a wide variety of other variables. In addition, only those interactions which are statistically significant ($p =$ at least .05) will be presented in this report. Therefore, apart from some interesting trends, which will be noted as such, the data described is statistically significant at the above level or beyond.

Results

Description of Subject Sample. The sample sizes for the four schools were divided relatively evenly: School A=121, School B=133, School C=95, School D=106. The total N for the entire sample was 455. The subject sample was approximately evenly divided between males and females (49% males and 51% females). The age distribution is as follows: 14% were 15 years old, 49% were 16 years old, 35% were 17 years old, and 2% were 18 years old or older. The median age of the sample was 16 years. The overall sample was composed primarily of 10th graders (44%), 11th graders (54%) with a small number of 12th graders (2%). The ethnic distribution was rather homogenous being 98% caucasian, and all subjects were unmarried.

Descriptive Differences Between the High Schools. The first question was whether there were differences among the four high schools and whether these differences related to rate of drug use. The four communities differed in geographical location: two were in the City of San Diego and two were in the County.

Figure 1 shows distributions of family income for the four high schools as reported by the students. School B, the most rural, is located in the least affluent community, while School D is in the most affluent area. A trend exists with Schools A and B having low rates of drug usage with about 25% of their students reporting any marihuana use as compared to School C and D in which 41% indicated use of marihuana. The most affluent school (D) had the highest drug usage while the least affluent, and most rural, school (B) had the lowest drug usage. Although School A was more affluent than School C, it had a lower drug usage rate than School C. Therefore, community affluence did appear to be generally related to overall drug usage, but it is obviously complicated by other important and as yet unknown factors.

Trend differences among the four communities were next examined in terms of characteristics of parents as they are seen and reported by their children. Mothers' and fathers' religious affiliations did not differ among the four communities, but church was reported as being "very important" to mothers more frequently at Schools A and B (47% and 42%) than at Schools C and D (32% and 39%). In addition, A and B School mothers were more frequently reported to have "a deep personal" interest in religion rather than "a philosophical or intellectual" one (64% and 61%), whereas the mothers at Schools C and D were seen as having less "deep and personal" interests in religion (51% and 49%) (see Figure 2).

More striking but not significant differences in community attitudes were apparent in several areas reflecting social conformity versus non-conformity. At Schools A and B parents were more often reported to feel that maintaining tradition was "very important" as compared with Schools C and D (see Figure 3).

In addition, parents at Schools A and B were more frequently against sexual freedom (see Figure 4), communal living (see Figure 5), and hippies (see Figure 6) than were parents at Schools C and D. Unconventional attitudes and behaviors clearly were less acceptable to parents in the low drug use communities.

In summary, the two high school communities with low drug usage differed in a number of ways from the high drug use communities with parental respect for traditional values, including religion, and parental disapproval of unconventional behavior more pronounced in low drug usage communities.

Correlates of Marihuana and Hallucinogen Use. The next step in the analysis was to pool the samples from the four high schools and to examine differences between students who had used marihuana and/or hallucinogens and those who had not. The total sample was divided into three groups: (1) those who had never used marihuana, 65% of the total sample; (2) those who had used marihuana experimentally or occasionally (i.e. ranging from once or twice a year to once or twice a month), 15% of the sample; (3) those who had used marihuana frequently (i.e. ranging from once a week to daily), 20% of the sample. In addition, the same quantitative usage level criteria were applied for hallucinogen use and the total sample was again divided into three groups: (1) those who had never used hallucinogens making up 85% of the sample; (2) the occasional hallucinogen users, representing 8%; and (3) frequent hallucinogen users making up the final 7%. Among the high school students surveyed, 145 or 35% of the full sample reported marihuana use. Hallucinogen use was reported by 61 students representing 15% of the total group. It must be noted that there is significant overlap or dual representation in these two groups since almost every hallucinogen user is present in the marihuana use group. In fact, every frequent hallucinogen user was found to be a frequent marihuana user as well. (See Figure 10.)

Specific statistical interactions were sought between the drug use criteria and a spectrum of variables which for purpose of organization were grouped in five general categories of characteristics as follows: (1) Demographic; (2) Scholastic; (3) Social; (4) Religious and Political and (5) Drug Use Patterns and Related attitudes.

Drug Use and Demographic Characteristics: Although the high school sample was evenly divided as to sex, a non-significant trend revealed more males than females as using marihuana (39% vs. 33%) and hallucinogens (18% vs. 12%). The male-female difference in the percentage of users was primarily accounted for by the frequent user category with males making up 58% of this group.

The reported median family income for the entire sample was in the \$10,000-\$15,000 per year range. Family income was not significantly related to marihuana use, but there were increased numbers of occasional users in the over \$15,000 yearly income level and increased numbers of frequent users in the less than \$10,000 income level. There is a significant interaction between marihuana use and the two upper income brackets in which frequent users report family incomes of over \$25,000 and occasional users strongly cluster in the \$15,000-\$25,000 range (Chi square 10.3, $p=0.01$).

The hallucinogen users cluster in the extremes of reported family incomes of those over \$25,000 and those under \$15,000 (Chi square 8.1, $p=0.05$). The students living in families with incomes of \$15,000-\$25,000 appeared more moderate in drug use in that they were significantly grouped among the occasional-experimental marihuana users, but rarely used hallucinogens.

Status of parents (e.g. biological parents, step-parents, etc.) did not differ between drug users and non-users. The majority of the sample (86%, $N=350$) reported their parents as "living and married" and 99% stated that their father and mother had been their principal guardians throughout their lives. Therefore the presence of broken homes did not distinguish between the user and non-user group. In addition age was not a factor in marihuana use. Although high school seniors reported significantly more hallucinogen use than did any other age groups (Chi square=6.1, $p=0.02$).

The following are those demographic characteristics which we had originally hypothesized as potentially differentiating between drug users and non-users but in our own study were not found to be significant: (1) Number, age and sex of siblings; (2) Students' age at which parents divorced, if reported divorced; (3) Students' age at which parents deceased, if reported dead; (4) Length of time lived in the same neighborhood; and (5) Number of geographic moves by the family.

Social Attitudes and Characteristics Related to Drug Use: The questionnaire did attempt to assess differences between users and non-users of drugs in a variety of attitudes, opinions and behaviors such as: life goals and plans; sexual behavior and mores; illegal activity; opinions re-

garding a spectrum of controversial issues and groups, etc. Both marihuana and hallucinogen users revealed trends towards more uncertainty regarding their future life plans. Drug users perceive familial conflicts in this area by seeing their parents as much less sympathetic to their life goals than do the non-using group (marihuana user, Chi square=8.3, $p=0.05$; hallucinogen user, Chi square=4.1, $p=0.05$). In conjunction with this drug users of both marihuana and hallucinogens indicate they are bothered by and have suffered more over the meaning of life than have non-users (marihuana user: Chi square=6.5, $p=0.05$ and hallucinogen user: Chi square=4.5, $p=0.05$).

With reference to other perceived life crises there were marked and interesting differences between non-users and users. Marihuana users reported markedly more crises with their families and the number of crises increased as a function of increased marihuana use (Chi square=20.4, $p=0.001$). Users of hallucinogens also reported increased conflicts and strife with their families (Chi square=8.2, $p=0.02$).

Occasional and frequent marihuana users and hallucinogen users are more likely to have experienced financial problems or crises than the non-users (marihuana: Chi square=9.2, $p=0.01$; hallucinogen: Chi square=6.7, $p=0.05$). It is easy to speculate that the cost of continued drug use would directly contribute to these crises especially since many of these young drug users come from families in the upper-income levels. Added to this are increased difficulties with girlfriends or boyfriends which are reported by the drug users. This is especially true with the marihuana user and again the degree of difficulty increases as the use of marihuana increases (marihuana: Chi square=19.2, $p=0.001$; hallucinogen: Chi square=8.6, $p=0.02$). Thus, the presence of drugs in a young person's life is highly related with the increased presence

of personal problems and crises. Whether this is the result of drug use or the motivation for it, cannot be answered at this time (See Table I).

In another series of items the subjects were asked to estimate their parents' as well as their own opinions on a three point scale (i.e. "For", "Indifferent" or "Against") regarding a number of potentially controversial "issues" of contemporary life. Table II includes those items which show significant differences between the drug-users and the non-users. A plus sign (+) indicates being in favor of the issue whereas a negative sign (-) indicates opposition to the issue.

The collection of opinions listed in Table II are not too surprising but it is interesting to note that both marihuana and hallucinogen users which agree with each other also see their fathers as generally agreeing with them on four of the five issues. This may be a reflection of permissive fathers among drug users, or the "groovy daddy" syndrome or a need for males who carry the relatively larger portion of the significance in the drug using group, to identify with their fathers.

Having had a "steady" girl or boyfriend was seen much more frequently among drug-users than in non-users. The marihuana users have had markedly more experience in "going steady" than non-users (Chi square=40.1, $p=0.001$) and the hallucinogen user also showed this same characteristic (Chi square=9.5, $p=0.01$). In addition, frequent marihuana and hallucinogen users reported steady relationships with more than one person, indicating more frequent long term involvements (marihuana: Chi square=20.4, $p=0.001$; hallucinogen: Chi square=13.9, $p=0.01$). Interestingly the duration of the alliances was not significant. Attitudes toward marriage were also correlated with drug use with the users indicating that they do not intend to marry in the future (marihuana: Chi square=4.1, $p=0.05$; hallucinogen: Chi

TABLE I

Crises reported as occurring significantly more often for High School drug users versus non-users.

Type of Crisis	Marihuana Users (p value)	Hallucinogen Users (p value)
The Meaning of Life	.05	.05
Financial Problems	.01	.05
Relationship with family	.001	.02
Relationship with girl- or boyfriend	.001	.02

TABLE II

Issues on which significant differences of opinion occurred between High School drug users and non-users.

Issue	Marihuana Users			Hallucinogen Users		
	You	Mother	Father	You	Mother	Father
Sexual Freedom	+		+	+		
Birth Control			-		-	-
Women's Rights						-
Communal Living	+			+		
Acid Rock	+	+	+	+		
Premarital Sex	+		+	+		+
Hippies	+	+	+	+		

square=5.4, $p=0.02$). The non-users reported much more optimism about future marriage plans.

A rather sobering fact is that more than half (59%) of the 157 students who reported having had sexual intercourse indicated they employed no form of birth control. It is interesting in this rather direct measure of personal responsibility that there were no differences between the drug and non-drug group. Half of the females (57%) reported relying upon rhythm, and the males were evenly divided between using condoms (51%) and practicing withdrawal (49%). A vast majority of the sample (94%) reported never having had a homosexual experience and there were no drug differences here either.

Significantly more marihuana users report having had sexual intercourse than non-users. In addition, the percentage of students having had sexual intercourse increases linearly with increased marihuana use. Figure 7 shows that 23% of non-users admit sexual intercourse compared to 52% of occasional users and 68% of frequent marihuana users ($p=0.01$).

Only 9% ($N=35$) of the sample reported ever having been arrested. Of these 35 students reporting arrests significantly more were reported by drug users (8%) than by non-users (1%). (Marihuana: Chi square=55.4, $p=0.001$; hallucinogen: Chi square=57.3, $p=0.001$) (See Figure 8). The majority of arrests however, were non-drug related since the drug-related arrests accounted for only 17% of those reported. By far the largest category of arrests were characterized as being for "other" reasons such as loitering, etc.

A selected number of familiar aspects of American life were listed and the students asked to rate each item on a four point scale ranging from "very important" to "of no importance" for himself and as he imagined each of his parents would. Table

III describes this data by listing the person estimated to have felt the item to be "important" or "unimportant" and the level of statistical significance between users and non-users of drugs. As an example, both marihuana and hallucinogen users feel their mothers view athletics as being significantly less important than do non-users. The only exception to the overall feeling that these items are unimportant to themselves and their parents is the marihuana users' opinions that their fathers attach importance to recreational leisure. It is possible that this may reflect an actual projected "hedonistic" image of their fathers. It is interesting that the drug-user indicates that being with the family is markedly less important to him than it is to his non-drug using counterpart. One could speculate that this may reflect feelings of alienation from their families among the young drug using group. Again, whether this precedes and motivates drug use or is a result of it, cannot be answered at this time.

Data indicate that hallucinogen and marihuana users had very similar views to their non-drug using colleagues concerning certainty of life and career goals. They also show equal optimism about social change and their own position in the world. Similarities in viewing their parents as being equally sympathetic to their lack of goals were noted, and no differences were found in the frequency of crises concerning their friends, their health or their own image of themselves.

Among those attitudes and opinions which might have been anticipated as potentially differentiating between drug users and non-users, there were no significant differences in the following characteristics: the certainty of future life plans and career goals; the tendency to plan daily activities; and the frequency in their lives of major crises related either to health or to relationships with friends.

TABLE III

Items rated as significantly different in
"Importance" by High School users and
non-users of drugs

	Marihuana Users			Hallucinogen Users		
	Person	Sign.	Level of Importance	Person	Sign.	Level of Importance
Athletics	Mother	.05	Not important	Mother	.05	Not important
Success in world:						
Financial				Himself	.01	Not important
Social	Himself	.05	Not important	Himself	.02	Not important
Maintaining tradition	Himself	.01	Not important	Himself	.01	Not important
Recreational leisure	Mother	.02	Not important	Mother	.02	Not important
Recreational leisure	Father	.02	Important			
Television	Himself	.05	Not important	Himself	.05	Not important
Being with family	Himself	.01	Not important	Himself	.01	Not important

Scholastic and Academic Characteristics and Drug Use: The subjects were questioned quite specifically about their scholastic histories and academic attitudes, which might have been affected by drug use.

No differences were found between the academic majors of drug users and non-users. Less than 5% ($N=10$) of the total sample reported any course incompletes during their school careers and there were no differences between the groups in this regard. Very few (2%) of the students indicated that they were now thinking about dropping out of school or had dropped out of school in the past for reasons other than health.

Grades in school were viewed as being less important to marihuana users (Chi square=13.9, $p=0.01$) and hallucinogen users (Chi square=25.1, $p=0.01$) than to non-users.

High school class level was found to be a factor in hallucinogen use, with use reported more frequently by high school seniors than by juniors (Chi square = 6.9, $p=0.05$). The difference, however, was not found among the marihuana users. Overall scholastic achievement for the total group was generally good with grades tending to be quite high, in that 83% of the respondents reporting grades A or B for their freshman year, 87% for the sophomore year and 86% for the junior year. When the sample was divided as to drug use and non-use, grades were slightly lower in the drug

group with more C and D grades reported. It was when the sample was divided by the amount of drugs used that highly significant findings emerged. In Figure 9 grade point averages are plotted against the quantitative level of drug use. There is an inverse linear relationship in which increasing higher drug use is correlated with decreasing grade point averages. This is especially true in the junior year (11th grade), where one can assume that this may be due to increased academic demands. It is true for hallucinogen users in each year of high school (Freshman: Chi square = 7.2, $p=0.05$; Sophomore: Chi square = 12.9, $p=0.01$; Junior: Chi square = 7.59, $p=0.02$), but it is true for marihuana users only during the last two school years (Sophomore: Chi square = 8.1, $p=0.02$; Junior: Chi square = 6.36, $p=0.05$). Again the heavy or frequent users of both marihuana and hallucinogens did report lower grades than did the other user and non-user group.

Religious Affiliation and Attitudes and Drug Use: Some interesting relationships were found between drug use and religious affiliation and attitudes. Respondents were asked their religious affiliations and the level of their personal commitment to religion. These questions were also asked with respect to the subjects' father and mother. The full sample had the following distribution regarding religion: Protestant 36%; Catholic 26%; the categories of "other" or "none" 36% with

2% of the respondents reporting being Jewish. Significantly fewer drug users reported belonging to an organized religion than did non-users (marihuana: Chi square=12.93, $p=0.01$; hallucinogen: Chi square=10.73, $p=0.01$). No significant relationships were found between mothers' and fathers' reported religious affiliations and their children's use of drugs. In addition, the drug users were found to characterize the quality of their religious interests differently than non-users. The users describe a more "intellectual and philosophical" interest in religion while non-users report a more "deep and personal" commitment to religious matters (marihuana: Chi square=4.93, $p=0.05$) (hallucinogen: Chi square=4.71, $p=0.05$). Both marihuana users (Chi square=21.7, $p=0.01$) and hallucinogen users (Chi square=15.69, $p=0.01$) as compared to non-users, feel that church affiliation is of "little or no" importance to them and extend these opinions to their mothers and fathers.

Political Attitudes and Opinions and Drug Use: A variety of questions were designed, using a number of different rating scales, to measure the political attitudes of our sample and the political attitudes they reported for their parents. The questions were such as to elicit a full political "profile" of the individual and his perception of his parents with a sufficient overlap of material to test for consistency in replies.

In one series of questions students were asked whether they and each of their parents were "For", "Indifferent" or "Against" specific political concepts. Table IV summarizes those questions on which drug users differed from non-drug users to a significant degree. Both marihuana and hallucinogen users are more "radical", to the left in their political opinions than their non-drug using peers. They significantly favor socialism and getting out of Vietnam. Conversely they are markedly more opposed to Governor Reagan, patriotism and law and order. The non-drug users had significantly opposite opinions on these items. On the majority of these issues, there were few significant differences between the parents of users and non-users. The issue that differentiates the perceived parents' opinion is that the drug using group reported their parents as being in favor of socialism. All of the above differences were significant at the 0.01 level or beyond.

In a second series of variables, students were asked to indicate from the following list which they felt were the most dangerous groups in the United States.

1. Those presently in power (the Establishment)
2. Black Militants

3. Left Wingers
4. Middle-of-the-Roaders
5. Right Wingers
6. Person violating criminal codes

They were also asked to indicate the three most dangerous groups as they thought their parents would rate them. The majority of non-drug users were approximately equally divided in choosing Criminals, Black Militants, or Left Wingers as being the most dangerous groups in the United States. In contrast, the occasional use of marihuana indicated that Black Militants, Criminals or the Establishment were the most dangerous. Finally, the frequent marihuana users selected the Establishment, Criminals, or Right Wingers as being most dangerous. Thus, "the Establishment" was perceived as being dangerous by progressively more subjects as drug use increased. The Table V ranks percentage of students who felt each group was the most dangerous. Two very striking facts emerged. First, the parental attitudes, as perceived by all groups of students, were *identical*. Second, students' own views differed as a function of drug use.

On an item which required the self-placement on the political spectrum, there was a significant tendency for all users of both drugs to place themselves to the left-of-center. In addition, the marihuana users reported a marked shift towards the left, in their political beliefs. ($p=0.01$). This was a linear function of drug use in which frequent users reported more radical change than occasional or non-users. Another finding was the progressive increase in the reported importance of "Political Participation" which also increased linearly with the progressive increase in drug use ($p=0.01$).

It is of interest that frequent marihuana users view their father as being significantly more conservative than do the occasional users. A similar difference was found regarding marihuana users' mothers in which their mothers were more likely to be rated as being conservative ($p=0.05$).

Characteristics and Patterns of Behavior Related to Drug Use: One of the central areas of interest focused on how the student first obtained each drug he had used. The questionnaire offered the following source choices: Parents, Peers, Doctors, Siblings, Sexual Partners, and Others. The analysis of the data enabled us to examine whether there were any similarities between first sources for the various drugs, and whether first sources of drugs differed for frequent and occasional users.

We found significant differences for the following drugs: *Tobacco*—Non-marihuana users obtained tobacco from parents or others ($p=0.05$). Occasional marihuana users obtained their tobacco

TABLE IV
POLITICAL ATTITUDES GIVEN BY STUDENT (HIGH SCHOOL)

ISSUE:	<u>STUDENT</u>		<u>MOTHER</u>		<u>FATHER</u>	
	FOR	AGAINST	FOR	AGAINST	FOR	AGAINST
<u>Socialism</u> Marijuana Hallucinogen	Users	Non-Users	Users	Non-Users	Users	Non-Users
	Users	Non-Users	--	--	Users	Non-Users
<u>Reagan</u> Marijuana Hallucinogen	Non-Users	Users	Non-Users	Users are Indifferent	--	--
	Non-Users	Users	Non-Users	Users are Indifferent	--	--
<u>Out of Vietnam</u> Marijuana Hallucinogen	Users	Non-Users	Users are Indifferent	Non-Users	--	--
	Users	Non-Users	--	--	--	--
<u>Patriotism</u> Marijuana Hallucinogen	Non-Users	Users	Non-Users	Users are Indifferent	--	--
	Non-Users	Users	--	--	--	--
<u>Law and Order</u> Marijuana Hallucinogen	Non-Users	Users	--	--	Non-Users	Users
	Non-Users	Users	--	--	--	--
<u>Anarchy</u> Marijuana Hallucinogen	Users are Indifferent	Non-Users	Users are Indifferent	Non-Users	--	--
	Users are Indifferent	Non-Users	--	--	--	--

TABLE V

MARIJUANA USERS AND NON-USERS:

"GROUPS SEEN AS BEING MOST DANGEROUS"

	NON-USERS	OCCASIONAL USERS	FREQUENT USERS
1.....	You: Criminals Fa.: Criminals M. : Criminals	You: Black Militants Fa.: Criminals M. : Criminals	You: Establishment Fa.: Criminals M. : Criminals
2.....	You: Black Militants Fa.: Black Militants M. : Black Militants	You: Criminals Fa.: Black Militants M. : Black Militants	You: Criminals Fa.: Black Militants M. : Black Militants
3.....	You: Left Wingers Fa.: Left Wingers M. : Left Wingers	You: Establishment Fa.: Left Wingers M. : Left Wingers	You: Right Wingers Fa.: Left Wingers M. : Left Wingers
4.....	You: Right Wingers Fa.: Right Wingers M. : Right Wingers	You: Right Wingers Fa.: Right Wingers M. : Right Wingers	YOU: Black Militants Fa.: Right Wingers M. : Right Wingers
5.....	You: Establishment Fa.: Establishment M. : Establishment	You: Left Wingers Fa.: Establishment M. : Establishment	You: Left Wingers Fa.: Establishment M. : Establishment
6.....	You: Middle-of-Roaders Fa.: Middle-of-Roaders M. : Middle-of-Roaders	You: Middle-of-Roaders Fa.: Middle-of-Roaders M. : Middle-of-Roaders	You: Middle-of-Roaders Fa.: Middle-of-Roaders M. : Middle-of-Roaders

You: Respondent
Fa.: Father
M. : Mother

from peers ($p=0.05$). Frequent marihuana users obtained tobacco from parents or others ($p=0.05$). *Alcohol*—Non-marihuana users obtained alcohol from parents ($p=0.01$). Occasional marihuana users obtained alcohol from peers ($p=0.01$). Frequent marihuana users showed no trend in this regard. *Marihuana*—Occasional marihuana users first obtained marihuana from their peers ($p=0.01$) but the frequent marihuana users first obtained marihuana from a sibling or other ($p=0.01$).

A quite striking aspect of the data above is the indication by occasional users of marihuana that their peers were the first source for alcohol, tobacco and marihuana. There was no such consistency of source for these three drugs for the frequent marihuana user, although his initially obtaining marihuana from a sibling is an interesting finding. Information regarding first source of other drugs was also elicited, but since the numbers were quite small, they could not be dealt with in a statistically satisfactory manner. Table VI illustrates all

TABLE VI

DRUGS AND FIRST SOURCE OF DRUG

Drug	N	% of Sample	First Source
Sedatives	25	7	Peers: N=9; M.D.: N=8
Tranquilizers	34	8	Parent: N=9; M.D.: N=11
Amphetamines	40	10	Peer: N=22
LSD	36	9	Peer: N=19; Other: N=12
Mescaline	31	8	Peer: N=15; Other: N=11
Other hallucinogen	12	3	Peer: N=8
Opiates	7	2	Peer: N=4
Heroin	0	0	--

drugs and their relationship to source. It is noticeable that as would be expected "peers" are the most common first source of drug.

The students were also asked to report their primary and secondary motivations for taking different drugs. Frequent marihuana users reported "Pleasure" as either a primary or secondary reason for using tobacco more often than did any other group ($p=0.01$). Experimental users of hallucinogen listed "Curiosity" as the primary reason for using marihuana more often than did frequent users of hallucinogen. In Table VII below, marihuana users were significantly over-represented among those stating "Pleasure", "Social Group Pressure", or "Relief of Boredom" as primary or secondary reasons for using tobacco. They were also significantly overrepresented among those choosing "Pleasure" and "Social Group Pressure" as primary or secondary cause of alcohol use. Hallucinogen users showed the same significant representation as marihuana users in selecting "Pleasure" as a main reason for alcohol

and tobacco use. Hallucinogen users were over-represented in the categories "Pleasure", "Curiosity" and "Relief of Boredom" as reason for marihuana use. The only significances between levels of drug use and reasons for use, of an individual drug were: heavy marihuana users gave "Pleasure" as 1st or 2d reason for tobacco use, and occasional hallucinogen users gave "Curiosity" as reason for marihuana use.

In attempting to determine more specific information as to what drug users personally experienced when they took a particularly drug we offered five choice categories describing the range of possible reactions: (1) Feeling of transcendence; increased awareness of self; (2) Pleasant, floaty feeling; (3) Little or no effect; (4) Feeling of loss and loneliness; depression and anxiety; (5) Nightmarish illusions; loss of contact with reality; feeling of terror. Students had to choose the feeling associated with a drug and indicate whether they "almost always", "occasionally" or "rarely" had that experience. The results were as follows: More

TABLE VII

Motivation for Use	Tobacco	Alcohol	Marijuana
<u>Pleasure</u>			
Marijuana users	.01	.01	
Hallucinogen User	.01	.01	.01
<u>Curiosity</u>			
Marijuana users			
Hallucinogen users	.01		.01
<u>Social Pressure</u>			
Marijuana users	.01	.05	
Hallucinogen users			
<u>Relief of Boredom</u>			
Marijuana users	.01		
Hallucinogen users	.01		

marihuana users report invariably experiencing feelings of transcendence when using marihuana than did occasional users ($p=0.01$). On the other hand a significant number of occasional marihuana users ($p=0.01$) report either experiencing bad effects (i.e. feelings of loss or loneliness; nightmarish illusions; or feelings of terror) or reported experiencing little or no effect from marihuana use. It is interesting that frequent users rarely report these negative experiences ($p=0.02$). The frequent hallucinogen user more often reported "occasionally" or "almost always" experiencing feelings of transcendence or increased self-awareness with LSD use than did the experimental hallucinogen users. Indications of negative or no effects with LSD use did not significantly differ between the frequent and experimental hallucinogen user. There were no differences reported in experiences with either mescaline or with "other hallucinogens" between occasional and frequent hallucinogen users. No significance was found between the occurrence or severity of marihuana or hallucinogen use and use of medically prescribed opiates. No significance was found between use or severity of use for marihuana and hallucinogens and having been under general anesthesia.

It is apparent that students do not spend as much money on drugs as we had anticipated. Only 6% ($N=13$) and 4% ($N=11$) report spending more than \$10.00 per month on non-prescription and prescription drugs, respectively. Although it is significant that of those 13 students who spent more money on non-prescription drugs, all but one was a frequent hallucinogen user.

Students were asked to give information regarding their parents' knowledge of and/or reaction to

their drug use, this data yielded no identifiable patterns of response. The only significances found from the numerous possible comparisons were: (1) significantly more ($p=0.05$) parents of marihuana users know they used tobacco; (2) more parents of marihuana users react favorably to the knowledge of their children's use of alcohol than do non-marihuana users' parents ($p=0.02$); (3) significantly fewer ($p=0.01$) parents of hallucinogen users know of their children's use of sedatives ($p=0.01$) and tranquilizers ($p=0.01$). Another comparison investigated the relationship between current drug use and the reported likelihood of trying new drugs in the future. While both marihuana and hallucinogen users' data were analysed, no significant trends were found for the hallucinogen users as a separate category. This may be explained by the tendency of hallucinogen users to already be multi-drug users, whereas subjects still in the experimental phase of marihuana use have usually tried only one drug. Table VIII outlines the reported desires of users and non-users of marihuana to experiment with new drugs in the future. The plus sign (+) indicates a desire to try a drug and the negative sign (-) indicates no desire to try it. It is readily apparent that marihuana users are much more likely to try new drugs in the future with significantly more users stating they might try barbiturates, tranquilizers, amphetamines and a variety of hallucinogens. In regard to future opiate use it is the *frequent* marihuana user who indicates a significantly higher possibility of opiate experimentation than does the occasional or non-marihuana user.* (Table VIII)

Patterns of Progression in Drug Use: Subjects were asked to report drug use during the four time periods: Grammar School, Junior High School,

TABLE VIII

Drug	Non-Marijuana user	Marijuana User	Significance
Tobacco	n.s.	n.s.	n.s.
Alcohol	n.s.	n.s.	n.s.
Sedatives	-	+	.02
Tranquilizers	-	+	.01
Amphetamines (oral)	-	+	.01
Amphetamines (injected)	n.s.	n.s.	n.s.
LSD	-	+	.01
Mescaline	-	+	.01
Other hallucinogen	-	+	.01
Opiates	n.s.	n.s.	.01 *

Sophomore Year (10th Grade) and Junior Year (11th Grade). Students who were sophomores at the time of the survey reported on their experience only through the sophomore year.

Tables IX and X present overall summaries of drug progression for males and females. The tables show when drug use started, the types of drugs used initially, and types of drugs used subsequently. For example, in Table IX, 16 males started with marihuana only (Use Category 1) before high school; nine of these continued with marihuana only in their sophomore year while five individuals progressed to multiple or other drug use, and two had stopped drug use. Of the seven males who started pre-high school and who reported information for their Junior year, one indicated marihuana use only, five indicated multiple drug use, and one indicated no further drug use.

Overall there is a trend for males to begin drug use with marihuana only, regardless of when they started. Conversely, females more frequently begin with multiple drugs or with a drug other than marihuana (usually amphetamines). Also among both males and females, there is a tendency for individuals who start drug use in later periods to start with marihuana only.

Further analyses were conducted to determine more specifically the most common or typical patterns of drug use over time. The percentage distributions for males and females with respect to when drug use started were similar. For males, 41% started pre-high school, 38% started in their Sophomore year, and 21% started in their Junior year. For females, 39% started pre-high school, 43% in their Sophomore years, and 18% in their Junior years. Of the total sample, 409 students gave complete information in the drug section. Of these 39% (N=161) reported using at least one drug at some time. Within the drug using population the most prevalent patterns were the 34% (N=56) who used only marihuana throughout the entire period of drug use. A slightly smaller number, 31% (N=50) started with multiple drugs and continued with multiple use. Since this drug use pattern is the second most common it should be broken down further for clarification. Of those subjects who started and continued with two drugs all but one subject used marihuana plus some other drug. Of those subjects who started and continued with 3 or more drugs, again all but one used marihuana plus other drugs. Therefore in this group marihuana use was a highly significant common denominator. The remaining three groups

were as follows: those who started on marihuana and went on to other drugs, 16% (N=26)—this was most often to LSD; and those who started on a drug other than marihuana and continued to use that drug only, 12% (N=19) in this group started with and continued on amphetamines and only one started with and stayed on LSD. Those who initially used something other than marihuana and went on to multiple drugs, 6% (N=10). Other categories or patterns of drug abuse were of negligible importance.

Of the 55 individuals who used marihuana only, 29 (70%) were occasional users (one or two times per month or one or two times per week). Thus drug users who start with marihuana and use it exclusively have a marked tendency toward rather *moderate* usage patterns. Of the 26 individuals who started with marihuana alone and then went on to other drugs, five (19%) were occasional users and 21 (81%) were frequent users. Thus, it was apparent that progression to multiple drug use was strongly associated with *frequent* marihuana use.

COLLEGE SURVEY

The survey of the college students was begun in late spring 1970 and required approximately one month to complete. The survey methodology was somewhat different for this sample since we had ready access to the students through the University's central administration. Computer print-outs which listed active students were available to us at the Registrar's Office. Every third student's name and residential location on campus was recorded on our own master list. The subjects were then contacted directly by the survey field workers, who themselves were either undergraduates or medical students. The subjects were told the purpose of the survey, the necessity of honesty in answering the questionnaire and specific questions about the questionnaire instrument itself were answered. Subjects were then asked if they would cooperate by filling out the questionnaire and complete anonymity was guaranteed. Every student agreed verbally to participate and a questionnaire with an addressed envelope was given to them with the instructions to place the completed questionnaire in the sealed envelope and drop it in the campus mail. The return rate of completed surveys was approximately 65% of the subject sample which had been contacted. Incidentally, the questionnaire instrument was identical to the one utilized for the high school students and is appended to this report (Appendix I).

Table IX
Progression in Drug Use: All High School Males

[illegible]

^a(1) - Marijuana only; (2) - Marijuana and hallucinogens (may include amphetamine and/or other); (3) - Marijuana and amphetamine (may include other drug but not hallucinogen); (4) - Marijuana and other drug (may not include hallucinogen or amphetamine); and (5) Other drug(s)

Table X

[illegible]

FIGURE 1

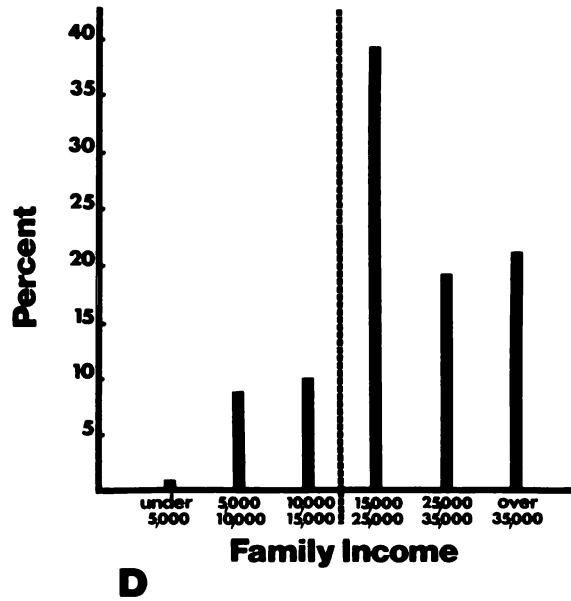
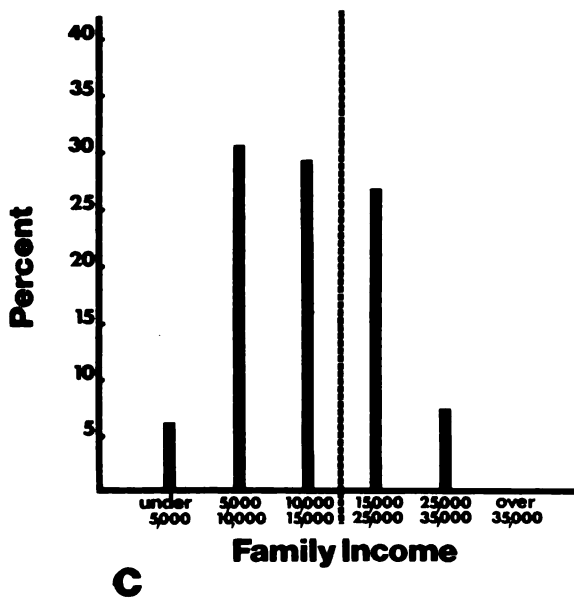
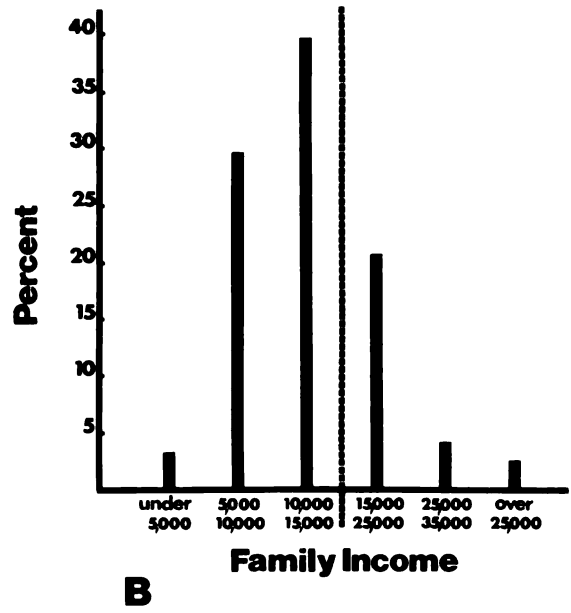
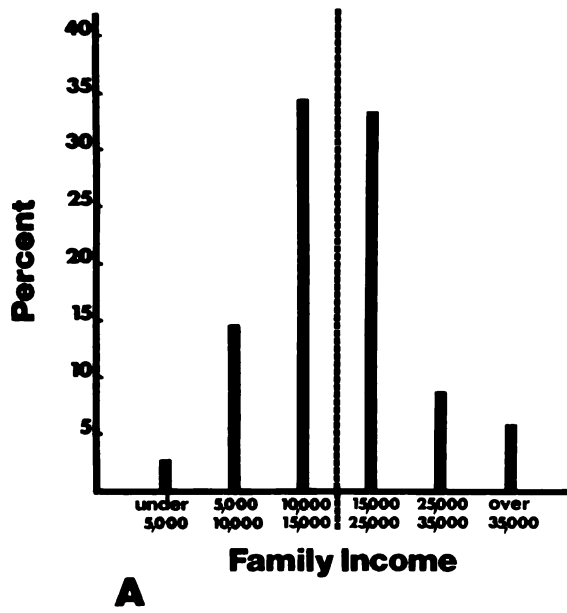


FIGURE 2

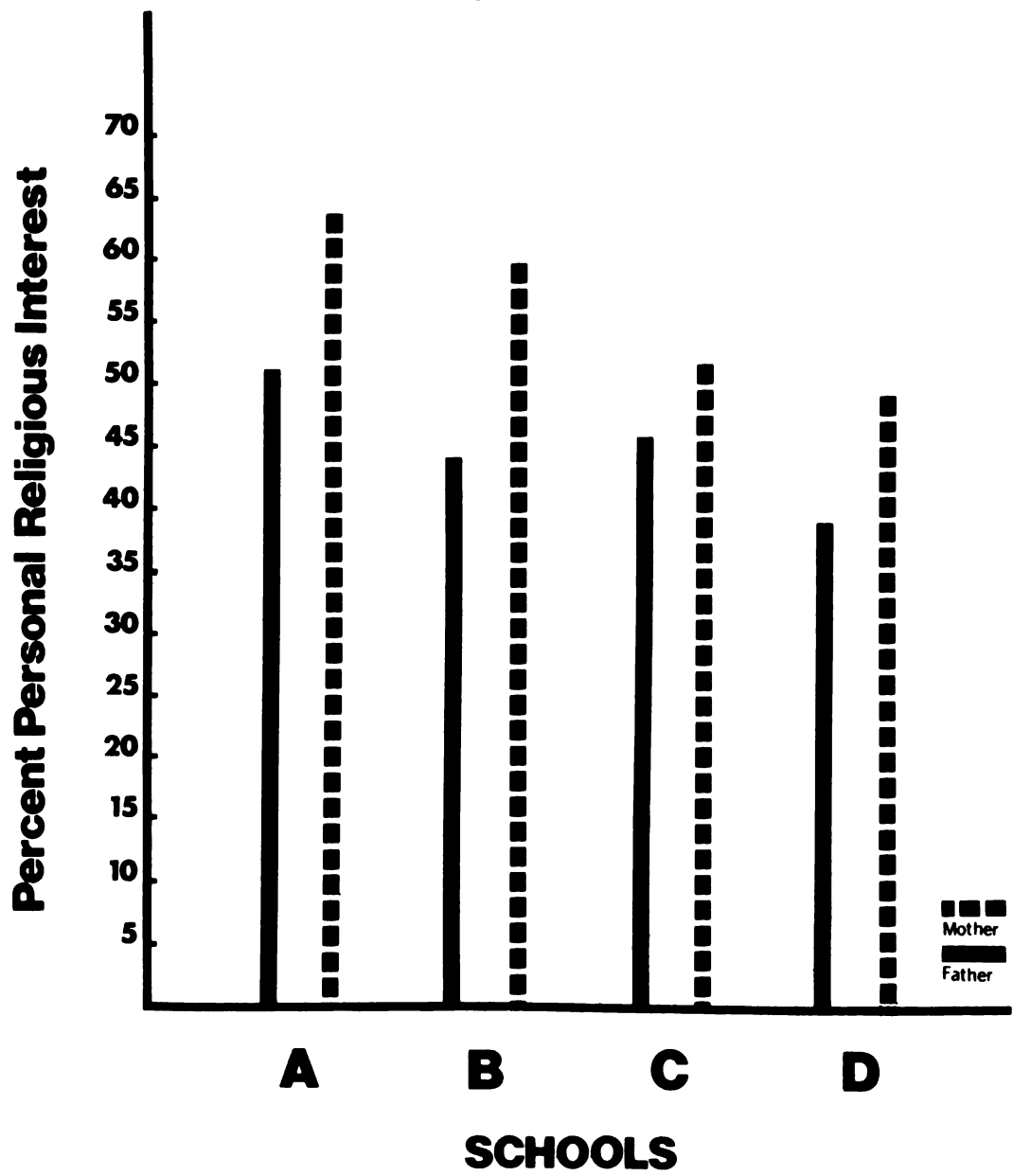
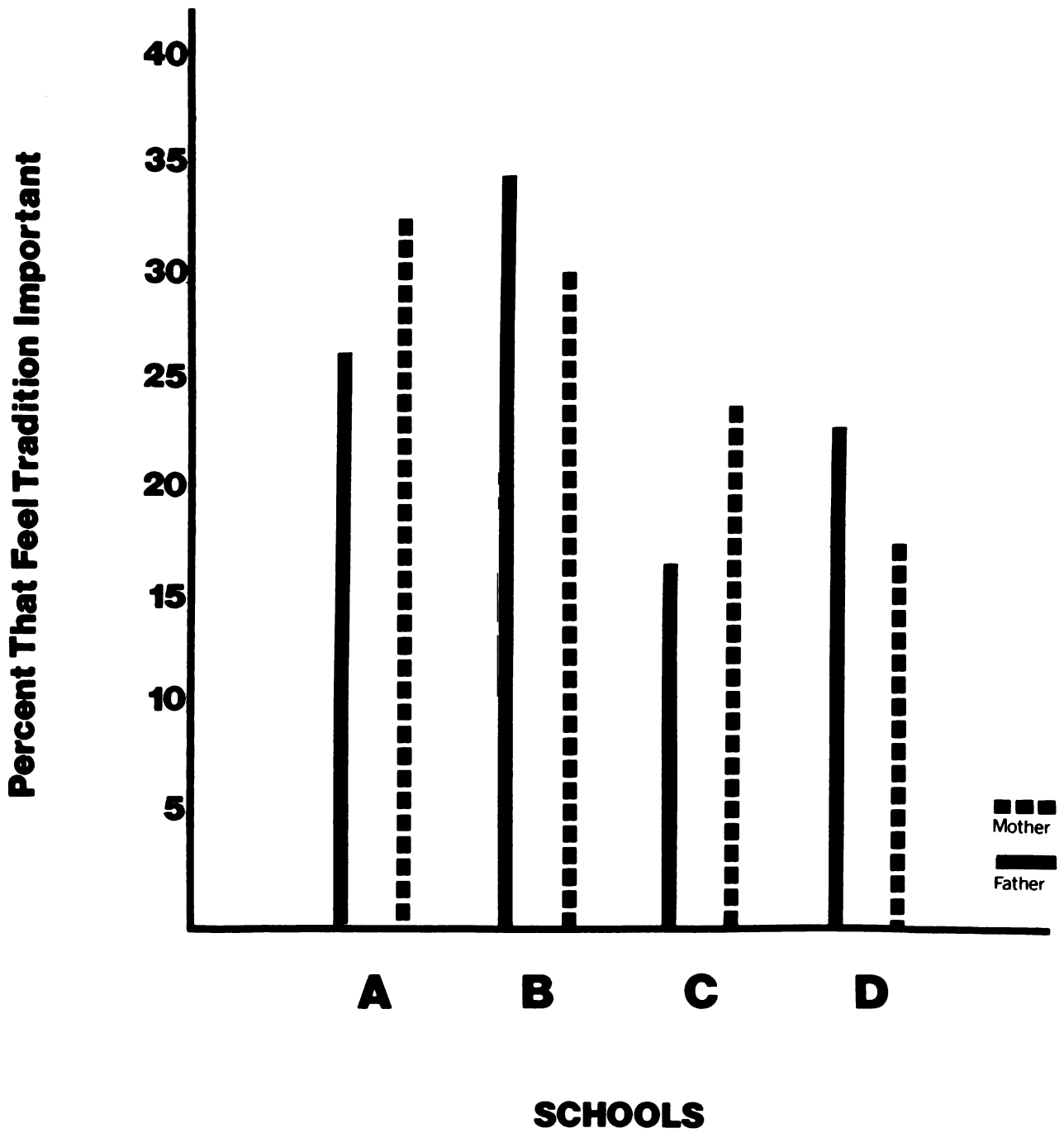
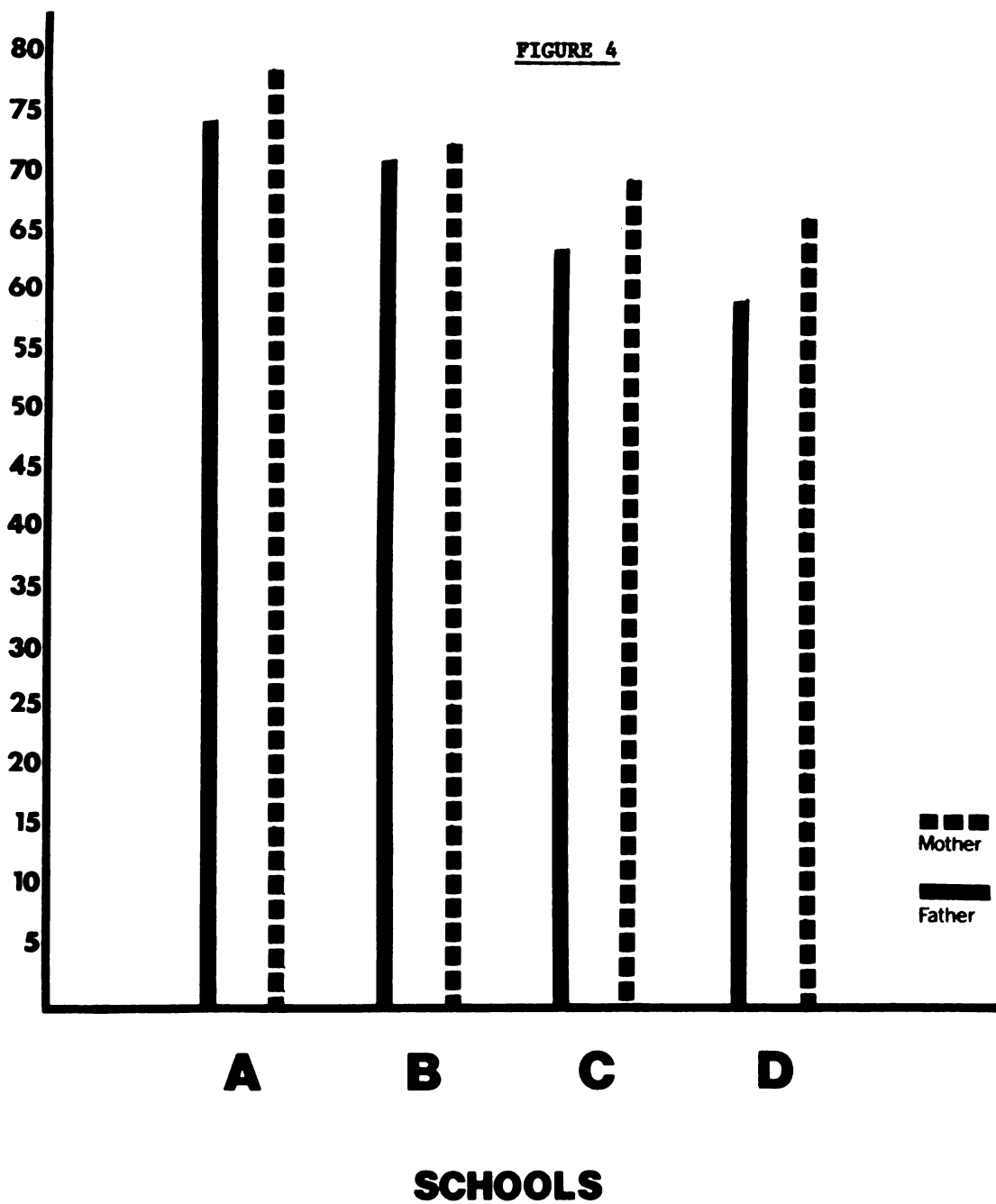


FIGURE 3



Percent Against Sex Freedom

FIGURE 4



Percent Against Communal Living

FIGURE 5

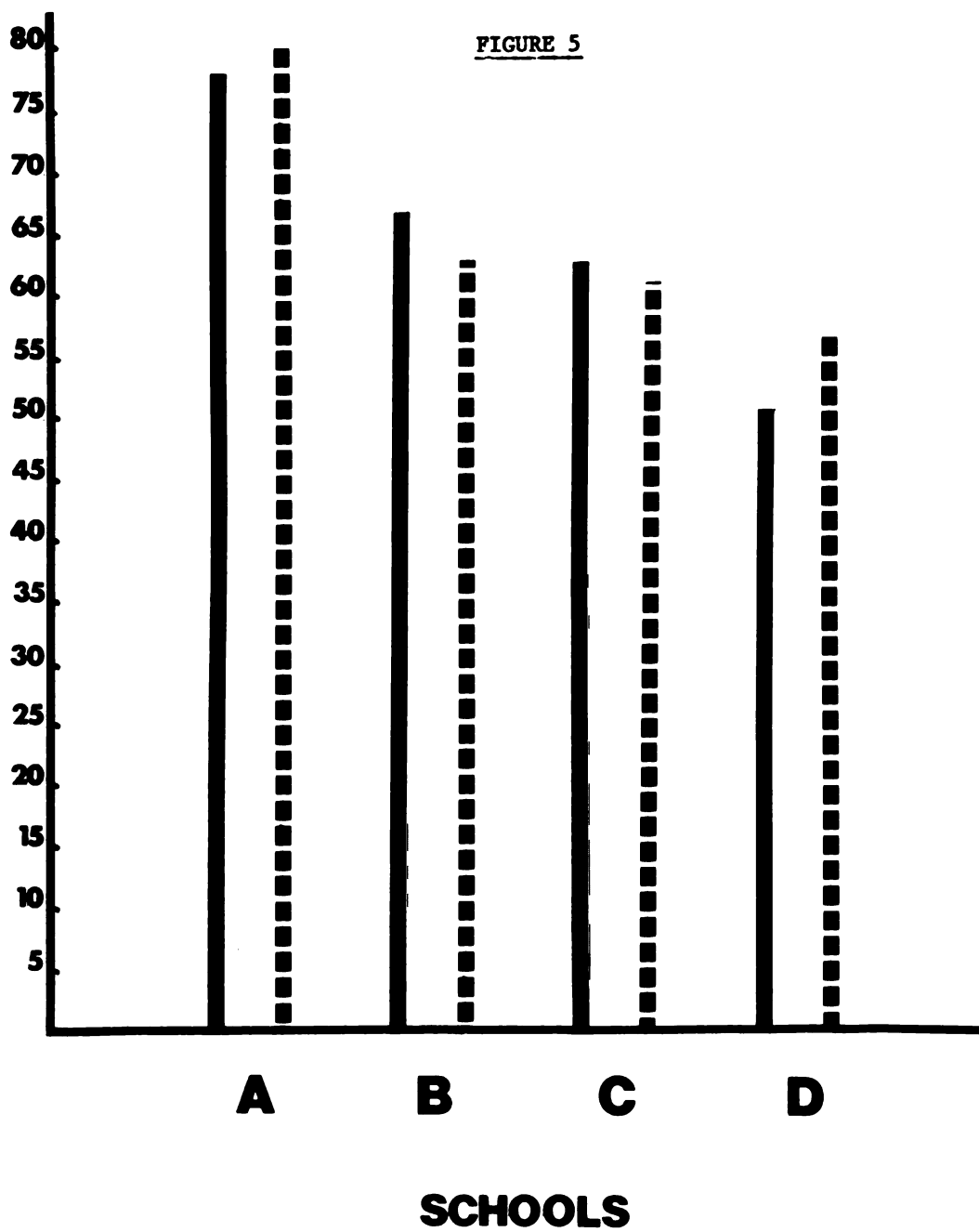


FIGURE 6

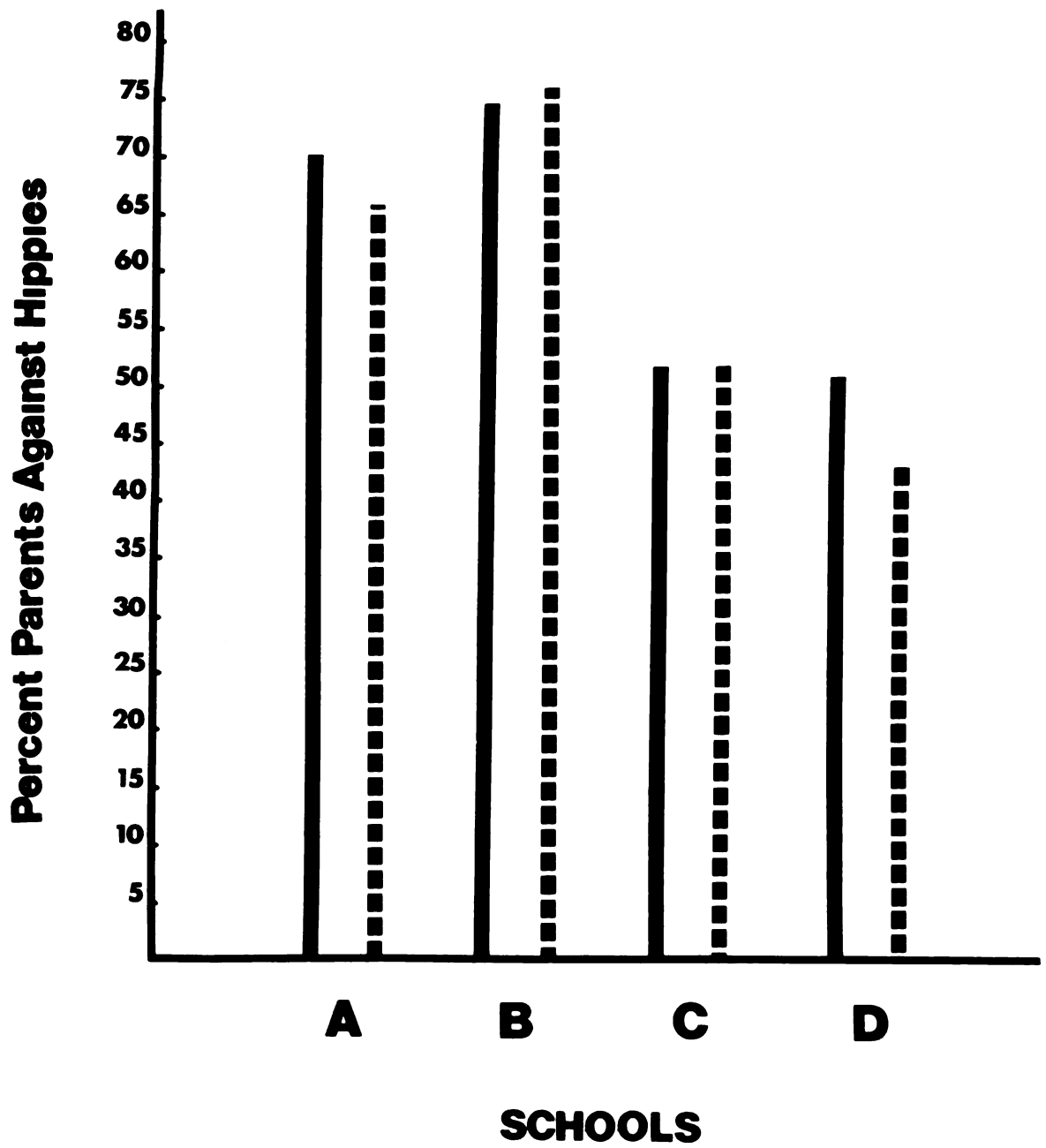


FIGURE 7

**RELATIONSHIP BETWEEN SEXUAL INTERCOURSE
AND DRUG USE (HIGH SCHOOL)**

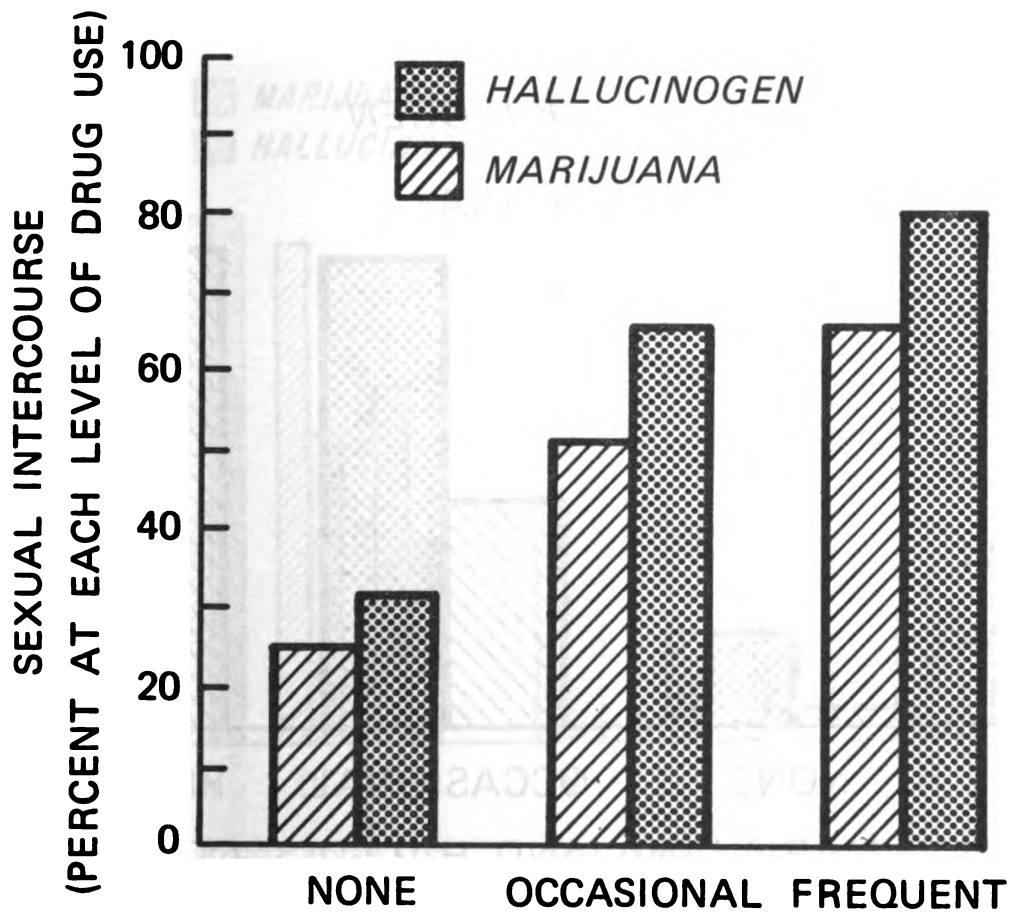


FIGURE 8

**RELATIONSHIP OF ARREST RECORD
TO DRUG USE (HIGH SCHOOL)**

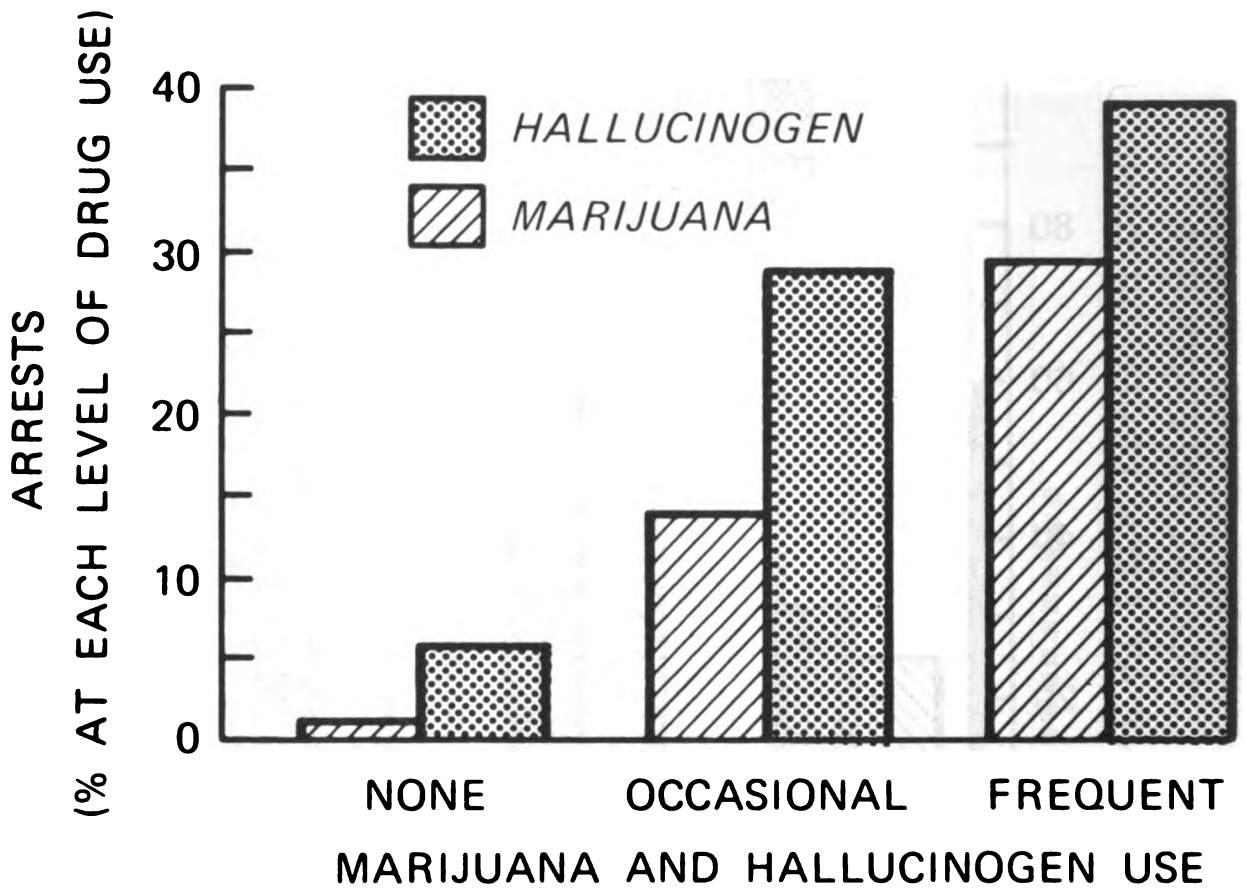


FIGURE 9

RELATIONSHIP OF DRUG USE TO GRADE POINT AVERAGE IN HIGH SCHOOL

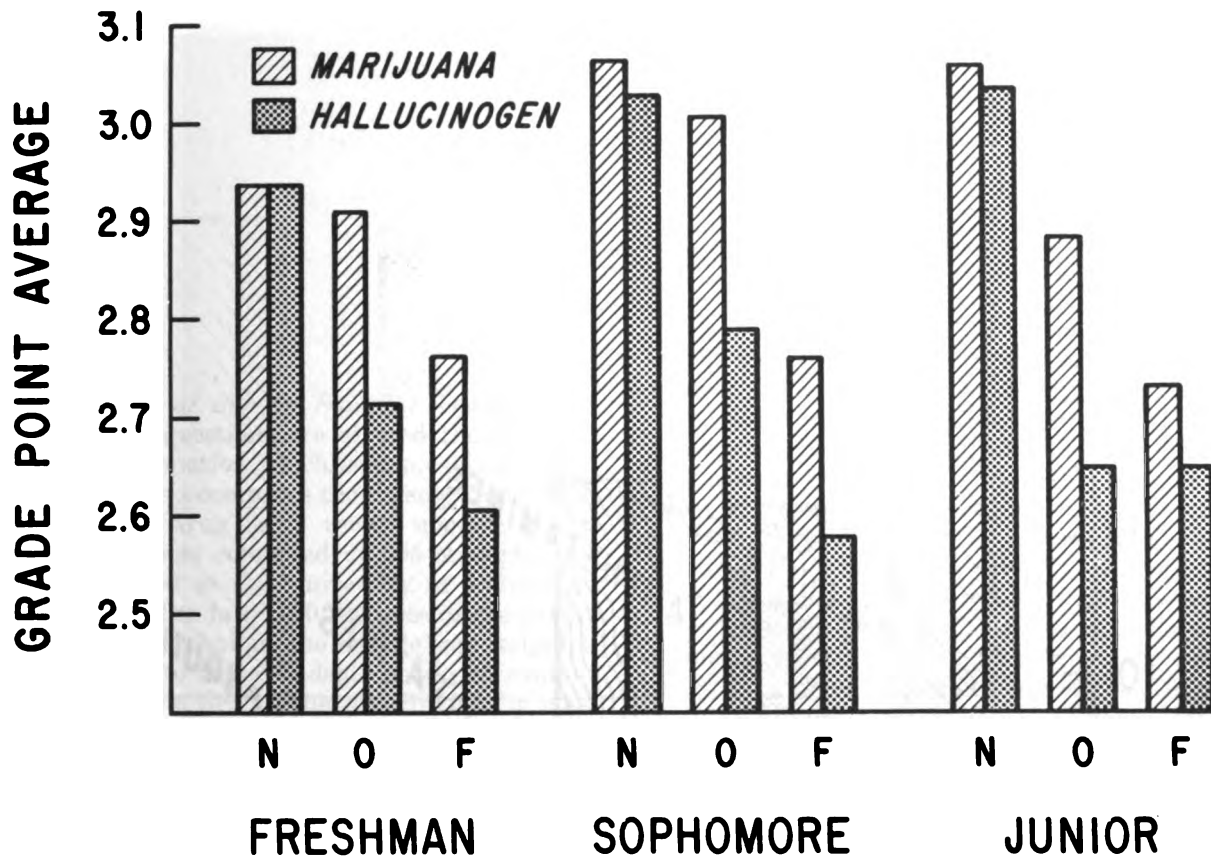


FIGURE 10

DRUG USE AMONG COLLEGE STUDENTS

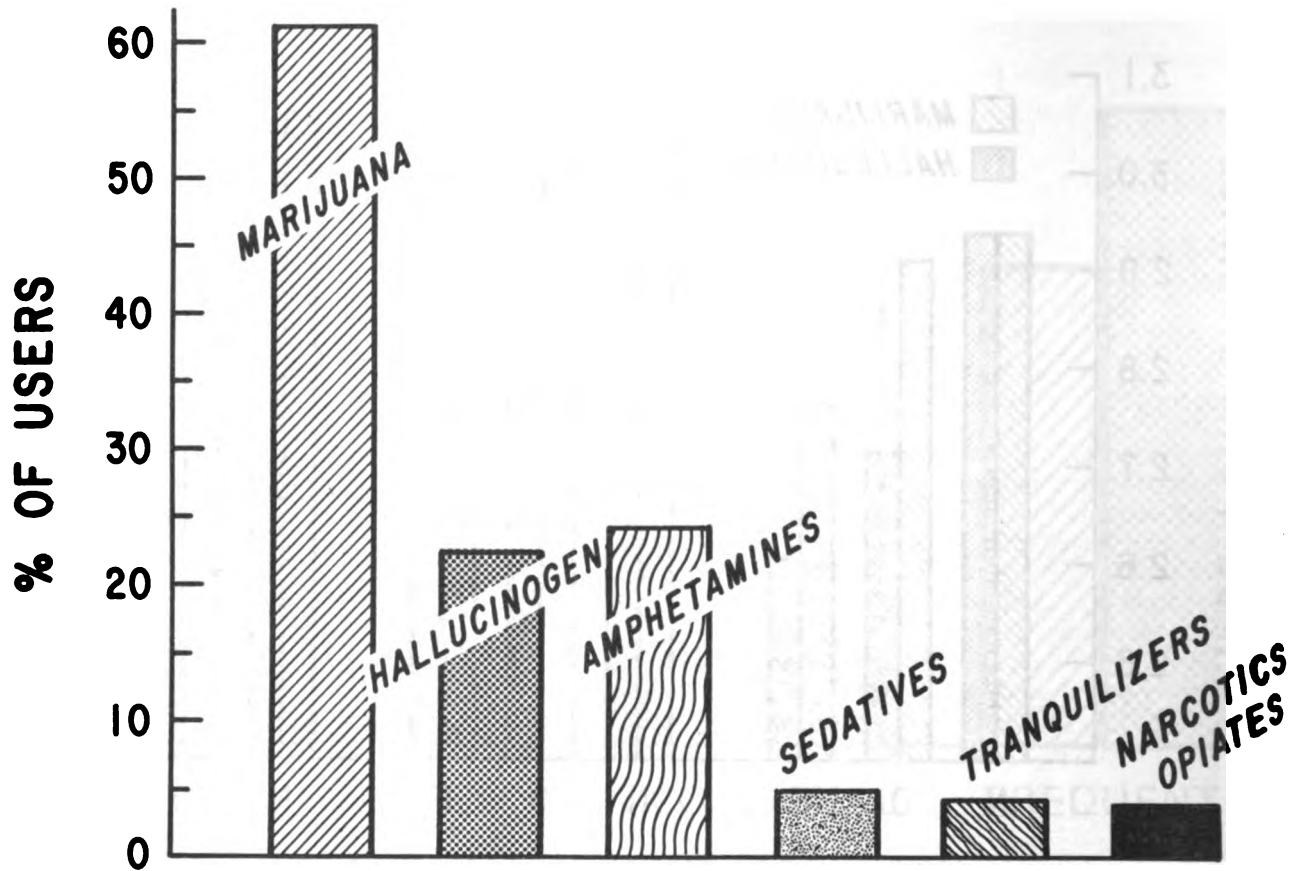


TABLE 1

Number and Percentage of Students
in Each Class

Class Standing	N	Percent of Sample
Freshman	63	31%
Sophomore	30	15%
Junior	34	17%
Senior	21	10%
Graduate	53	26%

201 *

RESULTS

Description of Subject Sample: Demographic items on the questionnaire elicited the standard kinds of information which is summarized below. A later analysis compares the demographic characteristics of drug users versus non-users. The total sample was composed of 205 students who were registered at the University of California, San Diego in the fall, 1970. Because of the nature of the survey technique the sample was weighted more heavily to those students living on campus (approximately 70%). The distribution by class standing is given in Table 1.

There were 127 (62%) males, and 78 (38%) females. The majority were single, 84%; 13% were married and 3% were divorced. Almost all of the sample was ethnically homogeneous listing Caucasian as their background (95%). The age range was 16 to 25 years with the mean age being 20.1 years.

Correlates of marihuana and hallucinogen use: Table 2 lists the specific drugs about which the group was questioned. The number and percentages of the group which had used each of the drugs, at least once, is included in the table. Data concerning use of tobacco, alcohol and other prescription and non-prescription drugs is not included here but will be described later in the report.

*The remaining four students were registered in the high school "Honors" program and were jointly enrolled at UCSD and as high school seniors in their local high school.

The main statistical analysis was carried out to examine differences between college students who had used marihuana and/or hallucinogens and those who had not. As with the high school group this sample was divided into three groups: (1) those who had never used marihuana, 38% of the total sample; (2) those who had used marihuana experimentally or occasionally (i.e. ranging from once or twice a year to once or twice a month), 34% of the sample; (3) those who had used marihuana frequently (i.e. ranging from once a week to daily), 28% of the sample. In addition, the same quantitative usage level criteria were applied for hallucinogen use and the total sample was again divided into three groups: (1) those who had never used hallucinogens making up 77% of the sample; (2) the occasional hallucinogen users, representing 15%; and (3) frequent hallucinogen users making up the final 8%. Table 3 summarizes the number and percentage of students at each usage level for both marihuana and hallucinogens.

Of the total college respondents (N=205), 62% (N=128) reported at least one time use of marihuana and 23% (N=47) reported at least one time use of hallucinogens. The usage rate we found among our college sample is 20% higher for marihuana use than was seen in the high school group and 8% higher for hallucinogen use. A comparison with the findings in previous college surveys are listed in Table 4. It should be noted that both hallucinogen and marihuana usage are more frequent in our sample than any of the earlier studies. Figure 1 is a graphic representation of the percentage of the sample using these various categories of drugs.

TABLE 2

Hallucinogens Taken by College Sample (N=201)

	% of sample which used drug at least once	% of sample which had never used drug
Marijuana	61.0% (125)	39.0%
LSD	12.7% (26)	87.3%
DMT	2.5% (5)	97.5%
MDA	0.5% (1)	99.5%
Mescaline	17.9% (36)	82.1%
Morning Glory Seeds	3.4% (7)	96.6%
Psilocybin	7.5% (15)	92.5%
STP	2.0% (4)	98.0%
Peyote	4.0% (8)	96.0%
Heroin	--- (0)	---

TABLE 3

Number and Percentage of Students
in each Usage Category

	Marijuana		Hallucinogens	
	N	%	N	%
Non-use	77	38	158	77
Oecasional use	70	34	31	15
Frequent use	58	28	16	8
Total	205	100%	205	100%

It is very important to note that in our sample there is a significant overlap of marihuana and hallucinogen use, since all but one of the hallucinogen users were included among the 128 marihuana users. This is shown in Table 5 which indicates that all of the frequent hallucinogen users and the majority of occasional hallucinogen users were frequent marihuana users.

Following this the data was subjected to simple statistical analyses which searched for significant interactions between qualitatively and quantitatively different patterns of drug use and a wide variety of other variables. In addition, only those interactions which are statistically significant ($p = \text{at least } 0.05$) will be presented in this report. Therefore, apart from some interesting trends,

TABLE 4

Year	Author	Sample Size	Drug Use in Percent	
			Marijuana	Hallucinogen
1972	This Survey	205	61%	--
1971	Brill, et al	369	36%	--
1971	Greenwald, et al	591	24%*	--
1971	Imperi et al	578	20%*	--
1970	King	518	25%	
1970	Mizner, et al	26,038	26%	5%
1969	King	730	14%	4%
1968	Eells	1,290	14%	6%
1968	Pearlman	1,245	6%	--

* Indicates that other hallucinogens have been included.

TABLE 5

Extent of Overlap between Marijuana
and Hallucinogen Use

HALLUCINOGENS	MARIJUANA		
	None	Occasional	Frequent
None	76	64	18
Occasional	1	6	24
Frequent	0	0	16

which will be noted as such, the data described is statistically significant at the above level or beyond. In addition, specific statistical interactions were sought between drug use criteria and a spectrum of variables, which for purposes of organization were grouped in five general categories of characteristics as follows: (1) Demographic; (2) Scholastic; (3) Social; (4) Religious and Political and (5) Drug Use Patterns and Related Attitudes.

Drug Use and Demographic Characteristics: One of the first variables examined with respect to drug usage was the sex ratio. There was no statis-

tically significant difference in drug use between the two sexes, for either marijuana or hallucinogens. The mean age for each drug and use level is included in Table 6. When compared with the mean age of the whole sample of 20.1 years, there were no significant differences found.

When the sample was divided by age into two groups, those under 18 years of age and those over 18 years of age, a significant relationship ($p=0.02$) was found in which marijuana users were found more often in the older age group (i.e. over 18 years of age). Figures 2, 3 and 4 illustrate: family incomes for the whole sample, and income

levels for both drug groups. The following are those demographic characteristics which we had originally hypothesized as potentially differentiating between drug users and non-users but in our study were not found to be significant: (1) Number, age and sex of siblings; (2) Students' age at which parents divorced, if reported divorced; (3) Students' age at which parents deceased, if reported dead; (4) Although 11% (N=12) of the sample reported their parents as being divorced and 11% (N=12) reported that one of their parents was deceased, there was no observable connection between parental marital status and drug use.

Social Attitudes and Characteristics Related to Drug Use: A wide range of variables were selected to comprise the "social" data for this analysis. Subjects were asked to report their own opinions or attitudes towards numerous social issues. They were also asked to indicate how they felt their parents would answer the same questions. We were interested in the students' general views of their lives, and their plans for the future; their feeling towards various aspects of our culture ranging from television to maintaining tradition: their sexual behavior and opinions. They were also asked to indicate the occurrence and incidence of different types of personal psychological crises in their lives: their attitudes towards "life style" issues, and predictions about their future in terms of career, marriage, etc.

This wide variety of information enabled us to ascertain whether drug-using students and their perceptions of their parents differed from their non-drug-using colleagues and in what fashion. It also allowed us to assess the extent to which the students' opinion differed from those of their parents.

There was a wide diversity within each level of drug usage, yet they all were found to be somewhat similar. The data indicated that both hallucinogen and marihuana users held the same opinions and attitudes as their non-drug-using colleagues concerning social change and their own position in the

world. In addition, the students appeared to be fairly homogeneous with respect to the reported importance of maintaining tradition, getting along with others, getting to understand themselves, etc.

The primary area of divergence between drug users and non-users was how they perceived their parents' viewing their (the students') career and life goals. Non-users of marihuana characterized their parents as being more sympathetic to their children's life and career goals than did marihuana users ($p=0.02$). Similarly, occasional marihuana users saw their parents as being more sympathetic to their life and career goals than did frequent marihuana users ($p=0.01$). It is interesting to note that marihuana users were less certain about their career and life goals than non-users ($p=0.05$). This uncertainty was much greater among frequent users than in the occasional user group. Hallucinogen users who, incidentally were frequent marihuana users, also characterized their parents as being unsympathetic to their children's career goals ($p=0.01$).

The indication that drug users saw themselves as differing in outlook from their parents was reinforced by data concerning sources of friction in students' lives. It is interesting that the occasional marihuana users reported fewer conflicts with their families than did either frequent or the non-marihuana users ($p=0.01$). Frequent marihuana users indicated more family crises than did the non-using group of students. ($p=0.01$).

In addition, the frequent marihuana user perceived more problems with friends and with lovers ($p=0.01$) than did occasional or non-users. Data concerning life crises was available for hallucinogen users, although a similar distinction between occasional and frequent users could not be made due to the small numbers reporting hallucinogen use. However, the hallucinogen user did experience more crises with family, friends and lovers than did non-users ($p=0.01$).

Students were asked to state whether they felt it important that one should devote time to being with family and children instead of to other

TABLE 6

Mean Age in Years as a Function of Drug Use

	Marijuana	Hallucinogen
None	19.8	20.2
Occasional use	20.6	20.1
Frequent use	20.1	19.4

activities. Non-marihuana users felt that this was far more important than did marihuana users ($p=0.01$). This was equally true for hallucinogen users in which the non-users gave a higher priority to being with family ($p=0.01$).

This may be an indirect measure of alienation from one's family in the drug using group. Recreational leisure was considered to be of greater importance by marihuana users than by non-marihuana users ($p=0.05$). No similar trend was found for hallucinogen users. Finally, students were asked whether they felt life was better or worse now than they expected when they were younger. Marihuana users significantly felt that life was better now, than previously expected, compared to non-users ($p=0.05$). To summarize it appears that marihuana and hallucinogen users in our college sample share most of the social attitudes of their contemporaries. They do, however, seem to feel themselves out of sympathy with their parents' attitudes on a number of issues and tend to have more crises with their families. Frequent and occasional marihuana users seem to differ markedly in this respect. Occasional marihuana users report less crises with their families than all other groups. Hallucinogen users seem to parallel frequent marihuana users in the above data but this is to be expected as there is overlap of frequent marihuana users in the hallucinogen user group (See Table 5).

Figure 5, which links sexual behavior and drug use illustrates that there were differences between marihuana users and non-users concerning sexual behavior, but these differences were not evident in the case of hallucinogen use. Significantly more marihuana users have had sexual intercourse than the non-users ($p=0.05$). College students who use marihuana are more likely to go steady than those who do not use marihuana, and frequent users exhibit this tendency more than occasional users ($p=0.05$). Marihuana users also reported having gone steady with a greater number of people than non-users ($p=0.05$). There were no significant differences between marihuana users and non-users concerning birth control, homosexuality or their intention to marry at some time in the future.

Scholastic and Academic Characteristics and Drug Use: The class level of the college students was significantly related to marihuana use ($p=0.01$) but was not related to hallucinogen use. As indicated in Figure 6, frequent marihuana use was more prevalent among juniors and seniors than among other classes. Sophomores tended to be occasional users and freshmen had a significantly high proportion of non-users.

The data available to estimate scholastic achievement included university students' grade-

point average while in high school. The average for the entire sample for each year in high school was very high with 72% reporting "A" averages as high school freshman and 81% reporting "A" averages as high school seniors. Unlike the high school sample no differences were found between grade-point data for hallucinogen or marihuana users and non-users in the college sample.

Students were asked to rate grades as being very important, occasionally important or of little importance. Students stated this for themselves and how they thought their fathers and mothers felt. There were no correlations between students' own responses and drug use of either type. One trend was found however, in the hallucinogen data concerning perceived parents' attitudes towards importance of grades ($p=0.05$); hallucinogen users saw their mothers as giving much greater importance to grades than did non-users. There were almost no incompletes reported in the academic histories of the sample and there was no correlation between number of incompletes and any drug use. Individuals were also asked if they had ever dropped out of high school or college, and whether they were presently thinking of dropping out of college. While none actually had dropped out, 12% ($N=24$) were thinking about it but neither of these questions correlated with drug usage. Academic major was not related to either hallucinogen or marihuana use. Almost equal percentages of science and non-science students used the drugs and there were no significant differences between majors within the general field of science or humanities.

Students were also asked questions concerning their degree of identification with or alienation from various groups on campus. There was no noticeable difference in responses between users and non-users concerning the student body, students in their class, faculty and student government. But occasional marihuana users differed from the non-users and frequent marihuana users by identifying more *highly* with the college administration than any other group ($p=0.05$).

Religious Affiliation and Attitudes and Drug Use: The religious affiliations of students and their parents were examined. A wide variety of religious affiliations was represented in the sample but drug use did not appear to be related to parent's religions. Students' own religious attitudes were correlated with drug use in that marihuana users considered church affiliation to be less important than did non-users. In addition, both marihuana and hallucinogen users were more likely to state that they had no religious affiliation than non-drug users ($p=0.01$). Those drug users who did have religious interests described their interests as intel-

lectual and philosophical rather than deep and personal ($p=0.05$).

Political Attitudes and Opinions and Drug Use: Drugs and their connection to the political attitudes of students were measured by a series of questions involving current political topics. In the main, drug users did not significantly vary politically from the non-users. On some issues however significant variation was found. As the level of marihuana use increased, so did the following political attitudes: (1) A positive attitude towards socialism ($p=0.01$) and (2) antagonism towards Governor Reagan ($p=0.05$). Hallucinogen user's political attitudes did not distinguish from non-users except in one case: they also had more positive attitudes toward socialism than the non-user. The political attitudes of the entire college sample were very homogeneous, locating them left of center on the political spectrum. Parental attitudes as perceived by the students did not correlate with drug use except on one case: Drug users' mothers were reported to be more hostile to Governor Reagan than non-drug users' mothers ($p=0.05$).

In an additional question students were asked to choose which they felt were the three most dangerous groups in the United States today from a list of six choices listed in the previous report. One of the interesting trends of the students' opinions was that comparatively few frequent marihuana users saw black militants as one of the most dangerous groups in the United States today when compared with the occasional and non-users. A significant number of the drug using group saw Right Wingers and the Establishment as being dangerous. Figure 7 lists the rankings by the students and the estimates of how their parents rate each of these groups as to danger.

Characteristics and Patterns of Behavior Related to Drug Use: It was already shown that in

the sample 100% of frequent hallucinogen users were also frequent marihuana users, and 75% of occasional hallucinogen users were also frequent marihuana users. The total number of hallucinogen users was 46. Table 6 describes the numbers of individuals using hallucinogens of various kinds. Mescaline and LSD were the most frequently used hallucinogens.

Information was elicited concerning the first source from whom various drugs had been obtained. The most common initial source reported for most drugs was "Peer", but first source for sedatives and tranquilizers tended to be "Parent" or "Doctor". Frequent users reported the same initial source for drugs as did occasional users.

Significant differences were found between users and non-users for both marihuana and hallucinogens when asked to indicate their primary and secondary reasons for using tobacco, alcohol, marihuana and mescaline. Of the twelve reasons offered for drug use, four were significant and are listed in Table 7.

As is seen those subjects who chose "Curiosity", "Social Group Pressure" and "Relief of Tension and Nervousness" as primary or secondary reasons for tobacco use, it is the marihuana users who had a significantly greater representation here than did non-users. For alcohol use, both marihuana and hallucinogen users were represented to a significantly greater extent among those indicating "Social Group Pressure" as a reason for alcohol use. Hallucinogen users reported "Pleasure" as the primary or secondary reasons for use of marihuana significantly more often than did non-hallucinogen users. Whereas marihuana users had a significantly higher representation among those who selected "Pleasure" or "Curiosity" as their primary or secondary reason for mescaline use than did non-marihuana users.

TABLE 6B

Number of Students Using Various
Hallucinogenic Drugs as a Function of Hallucinogen Use

Drug	Occasional	Frequent	TOTAL
Mescaline	22	14	36
LSD	14	12	26
Psilocybin	4	11	15
Peyote	3	5	8
Morning Glory Seeds	5	2	7
DMT	3	2	5
STP	2	2	4
MDA	0	1	1

TABLE 7

Reasons given for Drug Use

	Tobacco	Alcohol	Marijuana	Mescaline
<u>Pleasure</u>				
Marijuana users	n.s.	n.s.	n.s.	p=.01
Hallucinogen users	n.s.	n.s.	p=.01	n.s.
<u>Curiosity</u>				
Marijuana users	p=.02	n.s.	n.s.	p=.02
Hallucinogen users	n.s.	n.s.	n.s.	n.s.
<u>Social Group Pressure</u>				
Marijuana users	p=.05	p=.01	n.s.	n.s.
Hallucinogen users	n.s.	p=.05	n.s.	n.s.
<u>To relief Tension and Nervousness</u>				
Marijuana users	p=.02	n.s.	n.s.	n.s.
Hallucinogen users	n.s.	n.s.	n.s.	n.s.

An attempt was made to determine whether use of marihuana or hallucinogens correlated with enjoyment of, or experience with other drugs. For many drugs ranging from tobacco and alcohol, to tranquilizers and amphetamines, students who had used the drug were asked to rate their enjoyment on a 4-point scale: great, moderate, little, none. There was no significant difference in the amount of enjoyment derived from most drugs, between users and non-users of marihuana or hallucinogens. However, the following significant facts emerged: Hallucinogen users more often reported gaining little or no pleasure from alcohol, compared to the non-hallucinogen users ($p=0.01$). Hallucinogen users enjoyed marihuana use to a greater extent than did hallucinogen non-users ($p=0.01$), and frequent marihuana users more often reported great or moderate enjoyment of marihuana more often than did occasional marihuana user ($p=0.01$).

Completely consistent with these findings were the answers to a separate question regarding the types of experience derived from various drugs in which individuals were asked to characterize their experiences with marihuana, LSD, mescaline and other hallucinogens, using these categories:

- (1) Feeling of transcendence, increased awareness of self.
- (2) Pleasant, floaty feeling.
- (3) Little or no effect.
- (4) Feeling of loss and loneliness; depression and anxiety.
- (5) Nightmarish illusions; loss of contact with reality; feeling of terror.

Positive reactions (i.e. categories 1 and 2 above) to marihuana were reported by hallucinogen users to a greater extent than non-users ($p=0.01$). Similarly, frequent marijuana users reported more positive reactions to marihuana than occasional marihuana users. Thirty-eight percent of the college sample indicated that they had received by prescription opiates, but there was no correlation between use and non-use of marihuana or hallucinogens and the previous use of medically prescribed opiates. Frequent marihuana users had undergone general anesthesia more often than occasional or non-users ($p=0.05$).

The amount of money spent on drugs by this sample of students was not very great, again ninety-five percent reported spending less than \$10.00 a month on non-prescription drugs. Of the remaining 5% there was evidence that these were frequent marihuana users.

For each drug the student had used, he was asked to say whether his parent knew of this use, and if so, whether their reaction was favorable or unfavorable. Parental reaction did not correlate with level of drug use. As shown in Table 8, 45% of students stated that their parents knew of their marihuana use and only 47% of parents who knew of their children's marihuana use were said to have reacted unfavorably to this knowledge. Figure 8 also graphically illustrates this data.

Those individuals who had not used a particular drug were asked whether they would possibly experiment with it in the future. The results are outlined in Table 9. The response for each drug was then examined for possible divergence between those who were currently using drugs and

TABLE 8

Parental Knowledge and Reactions to Students' Drug Use

Drug	Number of Users	Parents know		Parents know and are unfavorable to Drug Use	
		%	N	%	N
Tobacco	113	79	89	42	38
Alcohol	176	88	154	23	34
Sedatives	23	52	12	31	4
Tranquilizers	35	66	23	20	5
Amphetamines	36	33	12	54	7
Marijuana	122	45	58	47	28
LSD	25	28	7	56	5
Mescaline	36	22	8	30	3
Other Hallucinogen	16	19	3	40	2
Opiates	11	27	3	66	2

those who were not. It was found that both marijuana and hallucinogen users indicated that they were more likely to use the following drugs in the future: amphetamines ($p=0.02$), LSD ($p=0.01$), Mescaline ($p=0.05$ for marijuana users and $p=0.01$ for hallucinogen users), other hallucinogens ($p=0.01$) and opiates ($p=0.01$).

A question of primary concern, about which there is little documentation is the role of marijuana and/or other drugs in escalating drug abuse. The college sample data was analysed to see if any patterns of progression in drug use appeared.

Subjects were asked to report drug use during ten time periods: Grammar School, Junior High School, 10th Grade, 11th Grade, 12th Grade, College Freshman, Sophomore, Junior, Senior and Graduate student. Ten subjects who started drug use as graduate students were omitted from the analysis because no follow-up was possible. The attached tables present overall summaries of drug progression for males (Table 10) and females (Table 11). The tables show when drug use started,

types of drugs used initially, and types of drugs used subsequently. The sample of drug users (less the above 10 subjects) included 79 males and 46 females (Total $N=125$). The percentage distributions for males and females with respect to when drug use started were somewhat different. For males, 34% started before college, and 30% started during the Freshman year of college; for females, 24% started before college and 39% started during the Freshman year. Thus, females tended to start drug use later than males, and after starting college.

For those who started drug use early (pre-12th grade), a high proportion (83%) of the total group consisted of *multiple drug users*. For those who started drug use in the 12th grade or later, a high proportion of cases (75%) used *marijuana exclusively*. Further analyses were conducted to determine more specifically the most common or typical patterns of drug abuse over time. The most prevalent pattern was for the use of marijuana only throughout the entire period of drug use.

TABLE 9

**Number of Students Disposed to Try
Drugs in the Future**

Drug	No. Asnwering	Percent who might take in future
Tobacco	74	9
Alcohol	18	44
Sedatives	160	56
Tranquilizers	151	52
Amphetamines	150	27
Marijuana	65	49
LSD	165	26
Mescaline	154	30
Other hallucinogens	171	30
Opiates	176	12
Heroin	186	6

This made up 42% of the drug using sample. Of those using marihuana only, 79% reported using it infrequently (no more than once or twice a year or once or twice a month) and 21% reported using it frequently (once or twice a week or daily). Thus the group using marihuana alone generally had much more moderate patterns of use. The second most common pattern among drug users was that which involved starting with multiple drugs and continuing with multiple drugs throughout the period of drug use (26%). Of these 32 individuals with this type of multiple drug use, 78% reported infrequent use of drugs other than marihuana while 22% reported frequent use of drugs other than marihuana. Therefore about 1 out of five users in this category progressed to frequent use of drugs other than marihuana and these were primarily LSD and amphetamines. Next most significant was that group which started with marihuana but extended use to other drugs (14%). Like the group with this type of usage pattern in the high school sample, they also moved primarily

to LSD use. This category is followed by 11% of drug users who started with a single drug other than marihuana and continued with a single drug, generally, but not necessarily, the same as the original drug and usually amphetamines. Finally, 8% of the drug user sample started with a single drug other than marihuana and then extended to multiple drug use.

It does appear that those drug users who begin earlier in life and start with multiple drug use have the greatest chance of escalating to more serious patterns of abuse. The most benign patterns is that of beginning with marihuana and using it exclusively, because these individuals do not even tend to quantitatively escalate their marihuana usage, often remaining an occasional rather than frequent users ($p=0.01$). No similar distinction could be made between frequency of hallucinogen or marihuana use. It is clear that those individuals who are current drug users see themselves as much more open to experimentation in reference to future drug use.

TABLE 10

Progression in Drug Use: College Males

		<u>Use Category^a</u>					<u>Use Category^a</u>				
		(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Began pre-12th grade		3	4	2	3	5	8	1			1
12th Grade Use											
Use category		Freshman Use					Sophomore yr.				
(1)	1	Use category					Junior yr.				
(2)	3	2					Use category				
(3)	1	2					(1)				
(4)	1	1					(2)				
(5)	1	3					No data				
Stopped		1					2				
Freshman yr.											
Use category		Sophomore yr.					Use category				
(1)	1	2					(1)				
(2)	1	3					(2)				
(3)		2					No data				
(4)		1					2				
(5)		2					2				
Stopped		2					2				
Sophomore yr.											
Use category		Junior yr.					Use category				
(1)	1	1					(1)				
(2)		1					(2)				
(3)		2					(5)				
(4)		1					No data				
(5)		1					4				
Stopped		1					1				
No data	2	2									

^a(1) - Marijuana only; (2) - Marijuana and hallucinogens (may include amphetamine and/or other); (3) - Marijuana and amphetamine (may include other drug but not hallucinogen); (4) - Marijuana and other drug (may not include hallucinogen or amphetamine); and (5) Other drug(s).

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TABLE 11

Progression in Drug Use: College Females

		<u>Use Category^a</u>					<u>Use Category^a</u>				
		(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Began pre-12th grade		1		1		5	Began 12th grade	3			1
12th grade							Freshman yr.				
Category Use (2)				1			Category Use (1)	1			1
(3)		1					(2)	1			
(5)				2			Stopped	1			
Stopped				2							
Freshman yr.							Began Freshman yr.	10	3	4	1
Category Use (1)							Sophomore yr.				
(2)		1		1		2	Category Use (2)	2	2	2	
(5)				1			Stopped	1			
Stopped				1			No data	7	1	2	1
Sophomore yr.							Began Sophomore yr.	3	2		
Category Use (1)						1	Junior yr.				
(5)		1				1	Category Use (1)	1	1		
Stopped				1			(2)	1	1		
No data				2			Stopped	1			
							Senior yr.				
							Category Use Stopped	1			
							No data	2	2		

^a(1) - Marijuana only; (2) - Marijuana and hallucinogens (may include amphetamine and/or other); (3) - Marijuana and amphetamine (may include other drug but not hallucinogen); (4) - Marijuana and other drug (may not include hallucinogen or amphetamine); and (5) Other drug(s)

Cont. Table 11

	<u>Use Category</u>				
	(1)	(2)	(3)	(4)	(5)
Began Junior yr.	5				
Senior yr.					
Category Use (1)	3				
Stopped	2				
Graduate yr.					
Category Use (1)	1				
Stopped	1				
No data	3				
Began Senior yr.	5		1		1
Graduate yr.					
Category Use (1)	3				
(3)			1		
(4)					1
No data	2				

FIGURE 1
DRUG USE AMONG COLLEGE STUDENTS

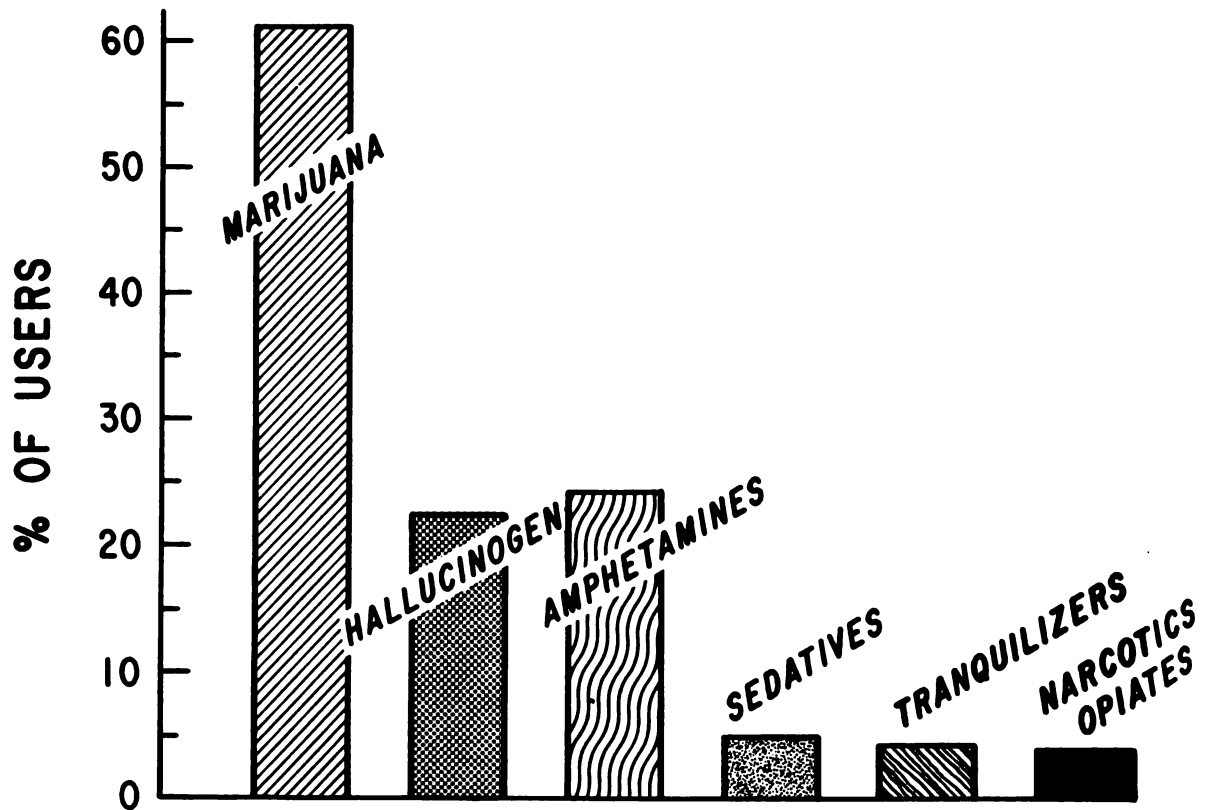


FIGURE 2

REPORTED YEARLY PARENTAL INCOME FOR COLLEGE

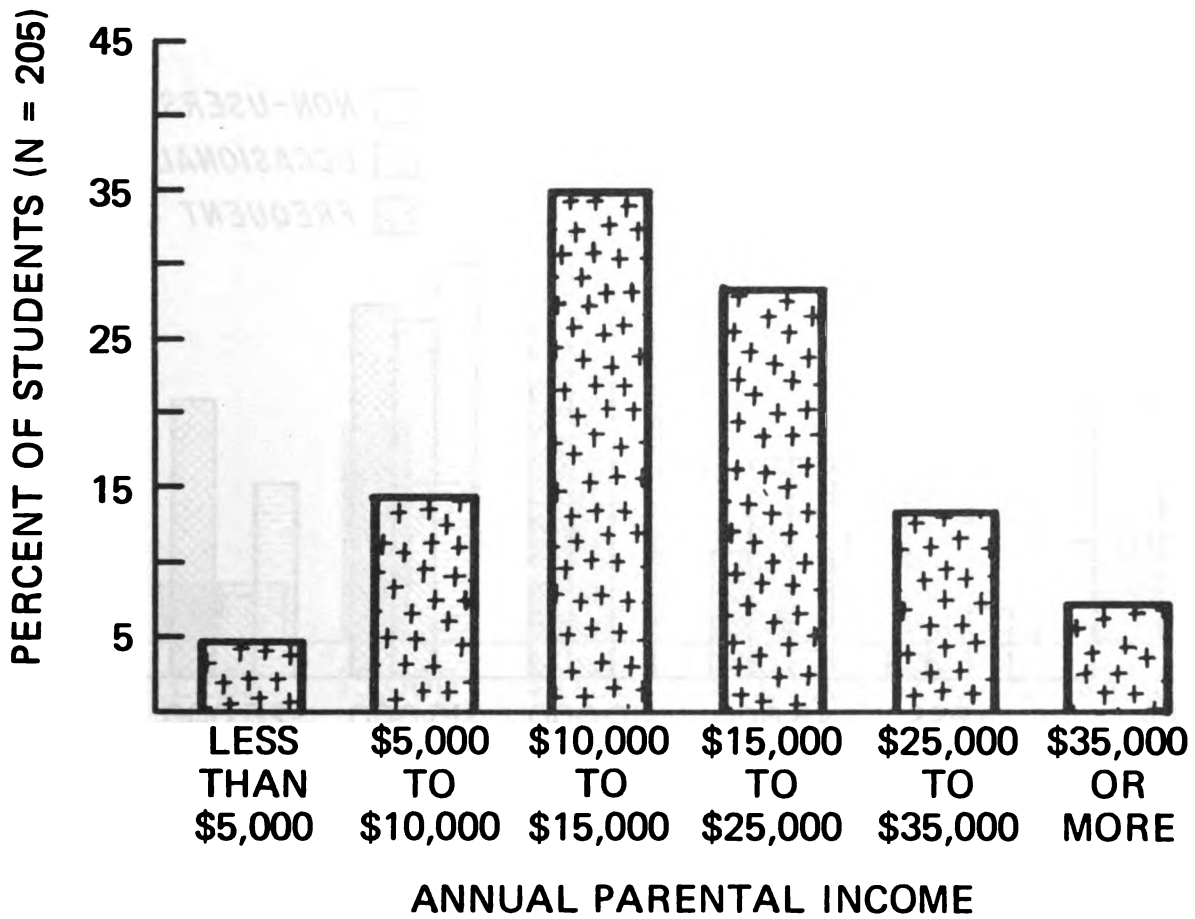


FIGURE 3

ANNUAL PARENTAL INCOME AND MARIJUANA USE FOR COLLEGE

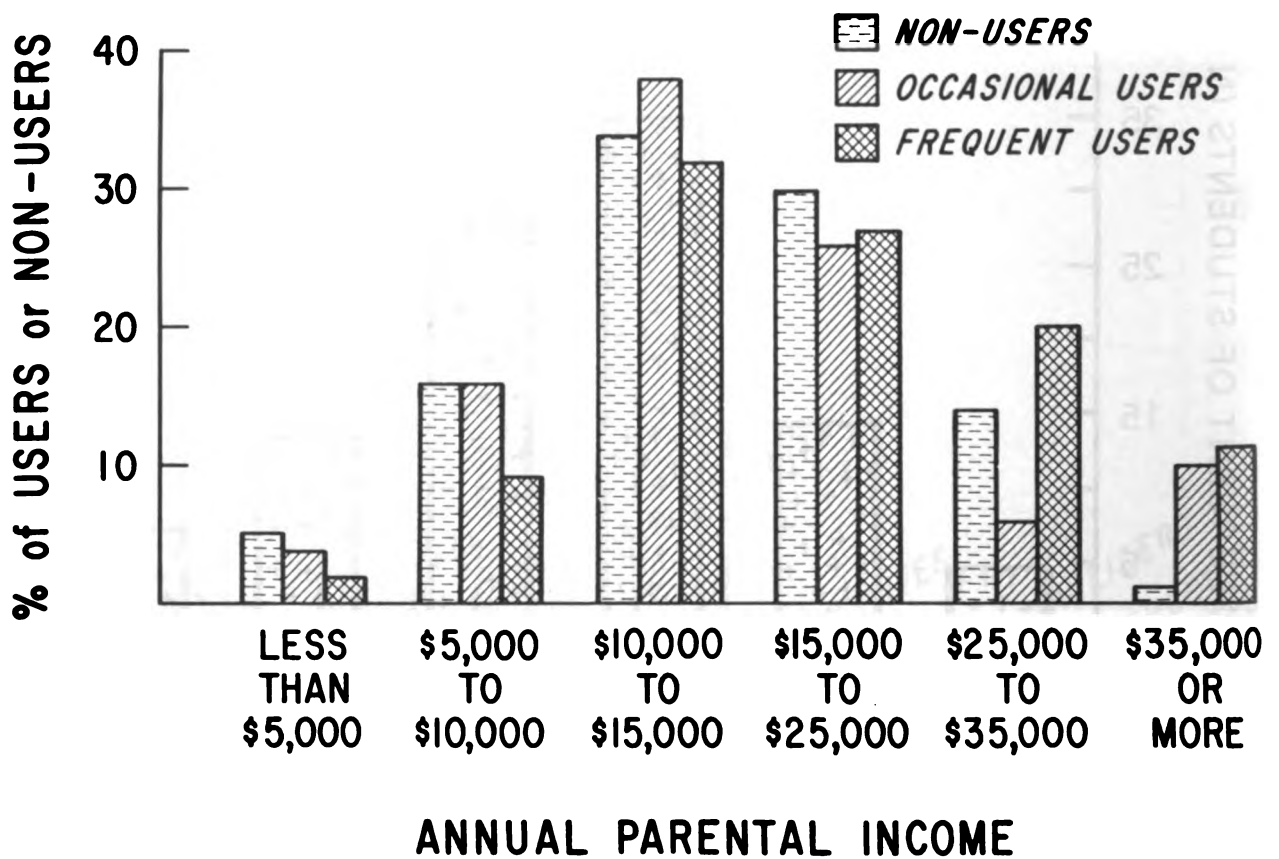


FIGURE 4

ANNUAL PARENTAL INCOME AND HALLUCINOGEN USE FOR COLLEGE

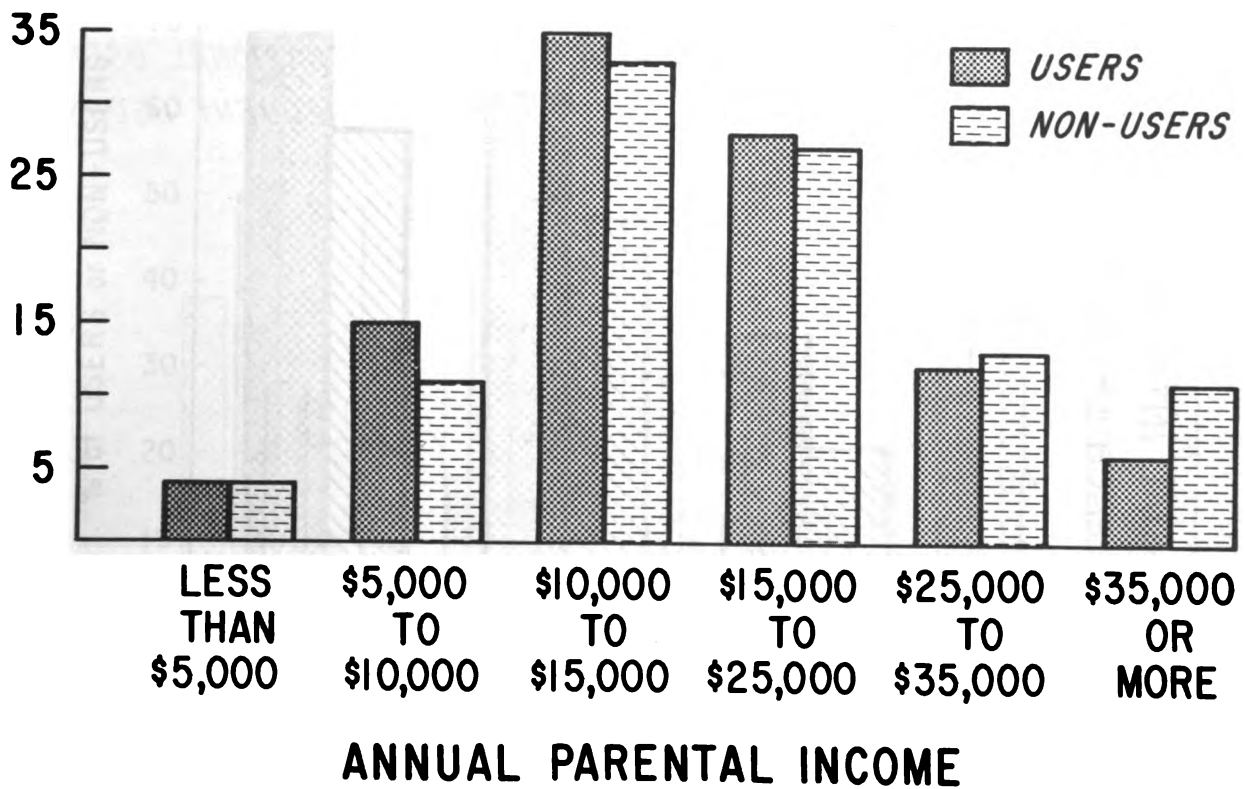


FIGURE 5

**RELATIONSHIP BETWEEN SEXUAL INTERCOURSE
AND DRUG USE (COLLEGE)**

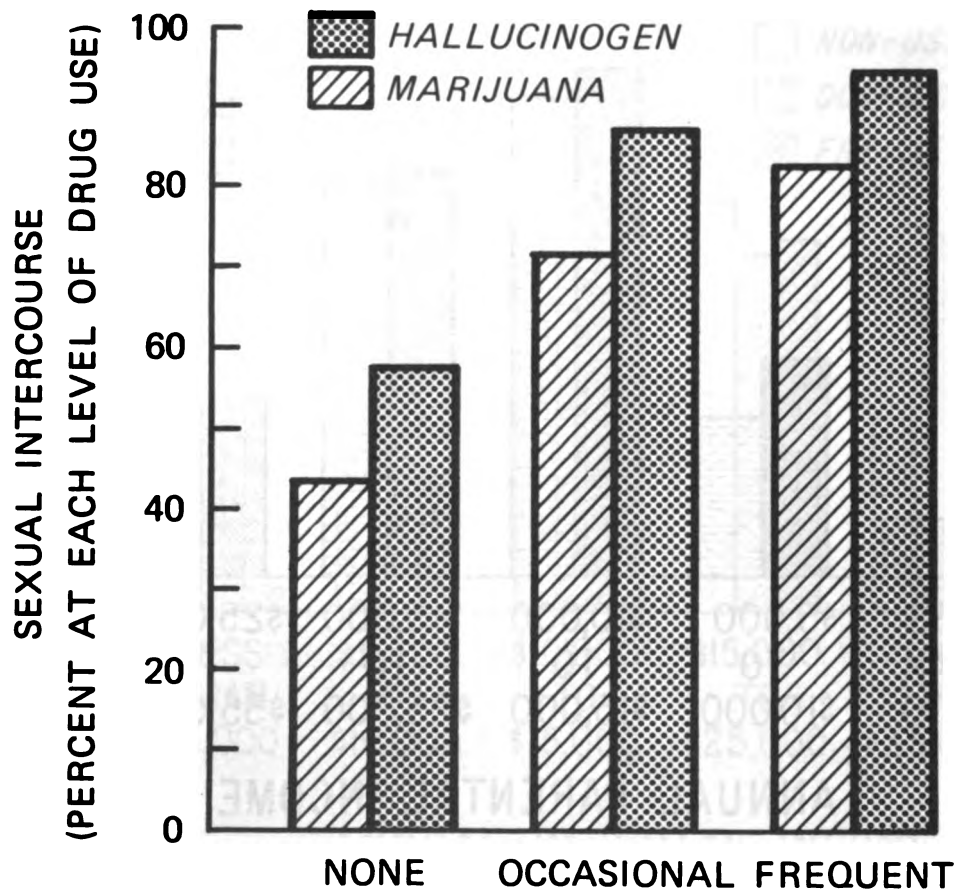


FIGURE 6

DRUG USE AT EACH CLASS LEVEL IN COLLEGE

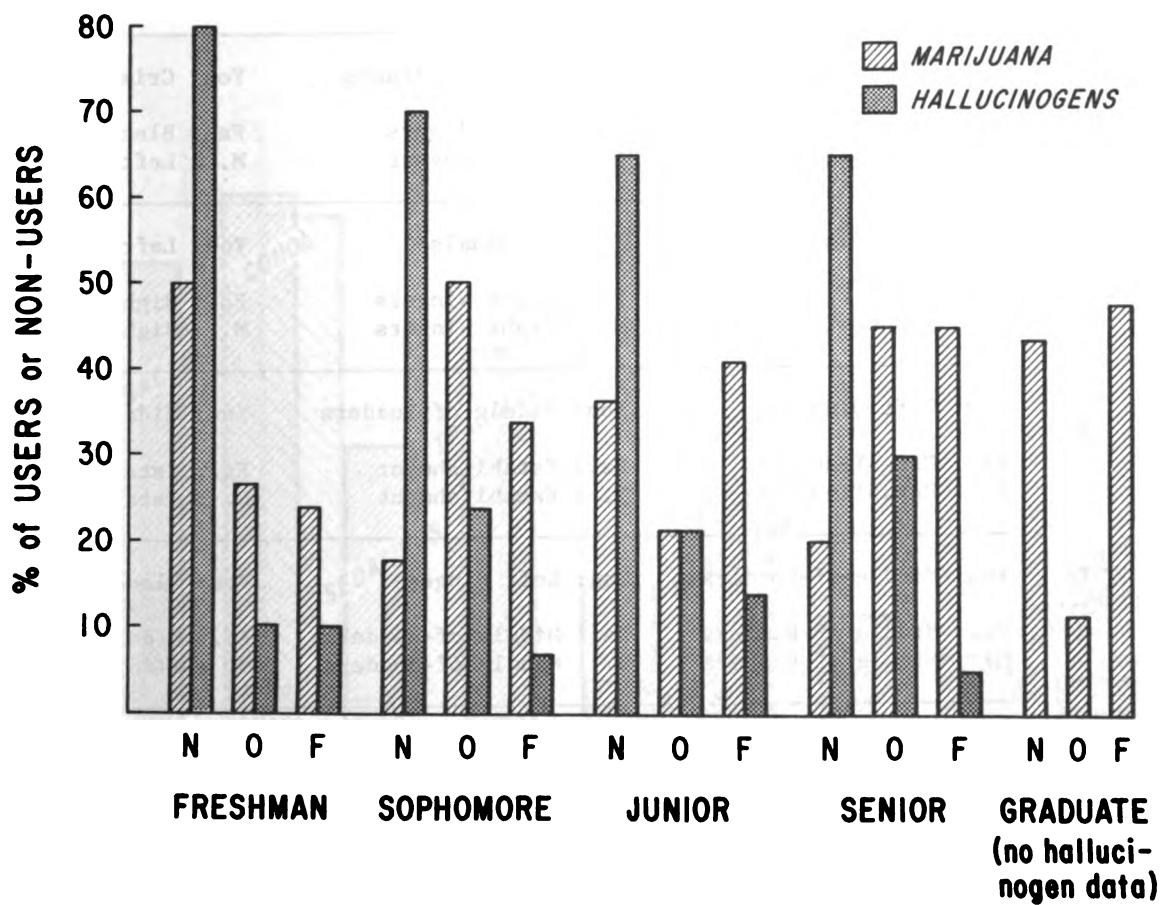


FIGURE 7

RANK BY % OF STUDENTS WHO CHOSE EACH CATEGORY

	<u>NON-USERS</u>	<u>OCCASIONAL USERS</u>	<u>FREQUENT USERS</u>
1....	You: Right Winger Fa.: Black Militants M. : Criminals	You: Right Wingers Fa.: Black Militants M. : Black Militants	You: Right Wingers Fa.: Left Wingers M. : Criminals
2....	You: Criminals Fa.: Criminals M. : Black Militants	You: Establishment Fa.: Criminals M. Criminals	You: Establishment Fa.: Criminals M. : Black Militants
3....	You: Black Militants Fa.: Left Wingers M. : Left Wingers	You: Black Militants Fa.: Left Wingers M. : Left Wingers	You: Criminals Fa.: Black Militants M. : Left Wingers
4....	You: Establishment Fa.: Right Wingers M. : Right Wingers	You: Criminals Fa.: Right Wingers M. : Right Wingers	You: Left Wingers Fa.: Right Wingers M. : Right Wingers
5....	You: Left Wingers Fa.: Establishment M. : Establishment	You: Middle-of-Roaders Fa.: Establishment M. : Establishment	You: Middle-of-Roaders Fa.: Establishment M. : Establishment
6....	You: Middle-of-Roaders Fa.: Middle-of-Roaders M. : Middle-of-Roaders	You: Left Wingers Fa.: Middle-of-Roaders M. : Middle-of-Roaders	You: Black Militants Fa.: Middle-of-Roaders M. : Middle-of-Roaders

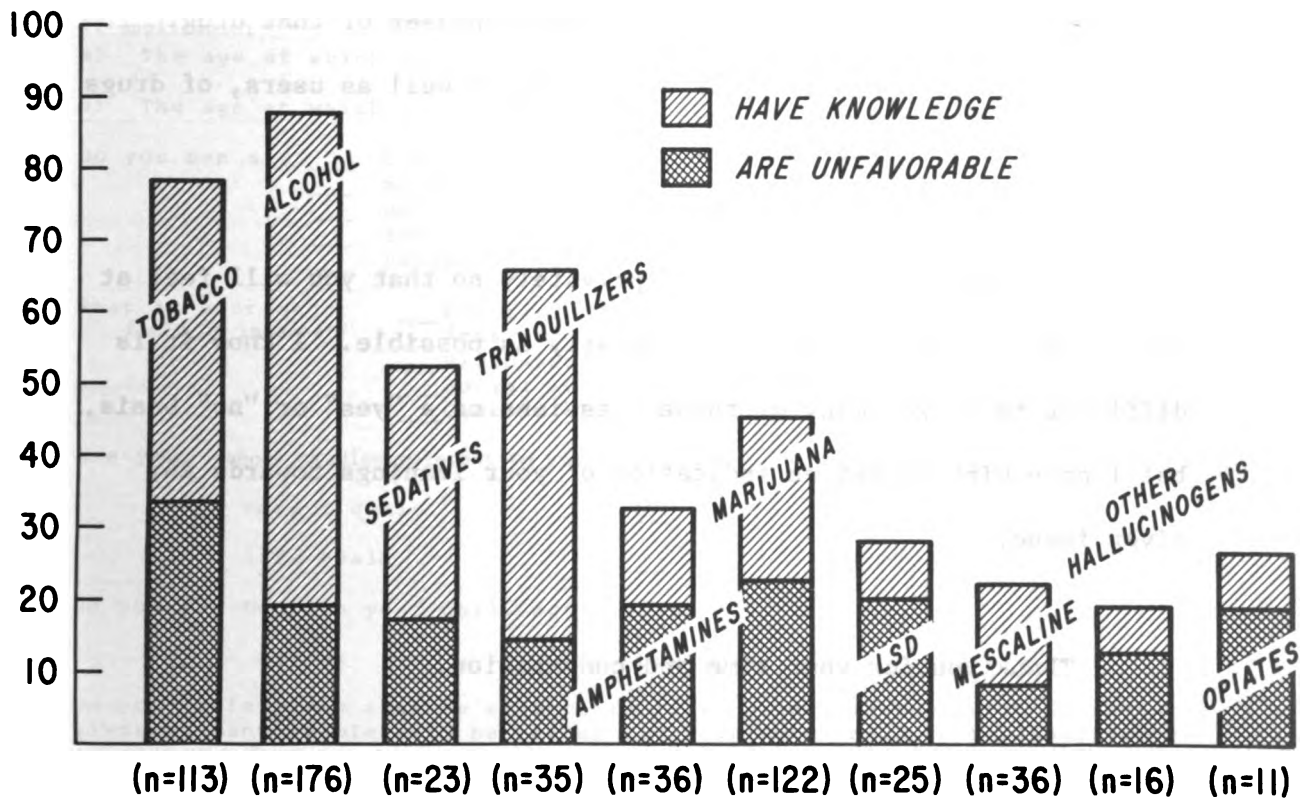
MARIJUANA USERS AND NON-USERS:

"MOST DANGEROUS GROUPS IN THE U.S. TODAY"

You: Respondent
Fa.: Father
M. : Mother

FIGURE 8

**PARENTAL KNOWLEDGE OF AND REACTION
TO COLLEGE STUDENT DRUG USE**

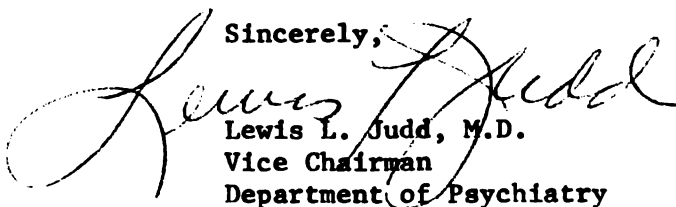


The enclosed survey is being conducted to obtain an up-to-date comprehensive, analysis of drug usage in the County of San Diego. This information will be used in supporting the development of future crisis centers for the San Diego county area. I want to stress that I am in no way connected with any law enforcement agency.

This survey also contains several pages of questions regarding your personality and other possible influences upon your drug usage. With this information, the personality of a user of a particular drug can be compared to the personality of the non-user of that drug. It is therefore very important for non-users, as well as users, of drugs to complete this questionnaire.

Fill out the questionnaire privately so that you will feel at ease in answering each topic as honestly as possible. I know it is difficult to answer many of these questions on a "yes" or "no" basis, but I only wish to get an indication of your leanings towards any given issue.

Thank you for your time and cooperation.

Sincerely,

Lewis L. Judd, M.D.
Vice Chairman
Department of Psychiatry

DRUG USE SURVEY

R

PLEASE READ DIRECTIONS CAREFULLY:

1. Sex: Male ☐ Female ☐
2. Are you: Married ☐ Divorced ☐ Single ☐
3. Your ethnic identity: Black ☐ Caucasian ☐ Mexican or
Oriental ☐ Spanish-American ☐
(Chicano)
4. Is your high school in a rural ☐ suburban ☐ urban ☐ area?
Was this in: ☐ Southern California
☐ Northern California
☐ a Western state other than California
☐ the Southwest
☐ the Midwest
☐ the East
5. Your present age:
6. If Applicable:
a) The age at which you moved away from home:
b) The age at which you became financially independent from your parents
7. Do you own a: ☐ bicycle
☐ motorscooter
☐ motorcycle
☐ sports car
☐ passenger car
8. What is your major field of interest? ☐ Physical Sciences
☐ Arts and Humanities
☐ Biological Sciences
☐ Social Sciences
☐ General Studies or Undecided
9. Are your school studies relevant to your:
career goals ☐ yes ☐ no
life goals ☐ ☐
10. Do you try to plan your daily activities:
☐ always ☐ sometimes ☐ never
11. Do your life plans include efforts to make changes in the world so that the lives of many people will be better (by working through technology, social or political systems, and so on)? Yes ☐ No ☐
If so, are you optimistic ☐, pessimistic ☐, or uncertain ☐ that yourself and people like yourself will bring about your desired changes.

PLEASE READ DIRECTIONS CAREFULLY:

(2)

For the following questions, please check each column. If you have more than one of a particular person in that relationship, refer to the one with whom you identify the most. Draw a line through the columns which are not applicable, e.g. if you have no brother, put a line down that column.

	Yourself	Father	Mother	Older Sister	Older Brother
12. Present religious affiliation:					
Protestant.....					
Catholic.....					
Jewish.....					
Other.....					
No religious affiliation.....					
13. Are your religious interests:					
Intellectual or philosophical.....					
Deep and Personal.....					
No strong Religious preference.....					

The following questions record your answer for each person using the following scale: 1=very important, 2=occasionally important, 3=of little importance, 4=of no importance

14. Church affiliation.					
15. Political participation					
16. Athletics					
17. Grades.					
18. Success in the world					
Financial.					
Social					
19. Understanding oneself					
20. Maintaining tradition					
21. Getting along with others					
22. Recreational leisure.					
23. Television.					
24. Being with family and children (emphasis on family over outside activities)					

PLEASE READ DIRECTIONS CAREFULLY

(4)

29.

For each of the following drugs, use the scale below to estimate use during the various time periods: (if in the 10th grade you smoked marijuana daily for a three month period, then record "1")

- 1=Daily or several times a day
- 2=Once or twice a week
- 3=Once or twice a month
- 4=Once or twice a year

Put a zero if it does not pertain to you (that is, if you didn't use the drug during this time period). Rx=by prescription; WMA=without medical advice.

	Coffee-Tea	Chocolate Drink	Chocolate Candy	Alcohol	Tobacco	Vitamin Pills	Over-the-counter Stay	Awakes (e.g., No Doze)	Mild pain killers (e.g., aspirin)	Darvon	Tranquilizers: Rx	Tranquilizers: WMA	Sedatives: Rx	Sedatives: WMA	Amphetamines: (e.g. Benzedrine, Dexedrine, diet pills: Rx	WMA	orally	by injection	Marijuana or hashish	THC (tetrahydrocannabinol)	LSD	Mescaline	Other hallucinogens	Opium	Heroin	Others: (e.g. glue, paint thinner, etc.)	Masturbation	Sexual Intercourse
GRADE SCHOOL:																												
JUNIOR HIGH:																												
HIGH SCHOOL:																												
10th grade																												
11th grade																												
12th grade																												
COLLEGE: If applicable																												
Freshman																												
Sophomore																												
Junior																												
Senior																												
Graduate																												
IF YOU KNOW: (If you don't know, draw an "X" through the particular persons' boxes)																												
Your Father:																												
in the past																												
in the present																												
Your Mother:																												
in the past																												
in the present																												
An older Sister:																												
in the past																												
in the present																												
An older Brother:																												
in the past																												
in the present																												

PLEASE READ DIRECTIONS CAREFULLY

(5)

30. If you have used a hallucinogen, indicate the number of times for each particular drug:

LSD	_____	MESCALINE	_____	STP (DOM)	_____
DMT	_____	MORNING GLORY SEEDS	_____	PEYOTE	_____
MDA	_____	PSILOCYBIN	_____		

31. If you have used the following drugs, use the scale for rating what you have experienced:

1=Feeling of transcendence; increased awareness of self
2=Pleasant, floaty feeling
3=Little or no effect
4=Feeling of loss and loneliness; depression and anxiety
5=Nightmarish illusions; loss of contact with reality; feeling of terror
6=None of the above

	almost always	Occasionally
Marijuana	_____	_____
LSD	_____	_____
Mescaline	_____	_____
Other hallucinogen	_____	_____

32. Have you ever been given opiates (emerol, Percoden, morphine, codeine, or the like) for medical reasons? YES _____ NO _____

If so, how many times? _____

33. Have you ever been under general anesthesia? YES _____ NO _____

If so, how many times? _____

34. How much do you spend on drugs each month?

	prescribed drugs	Non-prescribed drugs
\$ 0	_____	_____
\$1-\$10	_____	_____
\$10-\$20	_____	_____
\$20-\$40	_____	_____
more than \$40	_____	_____

35. If you have sexual intercourse, do you practice any form of birth control? YES _____ NO _____

If yes, and you are a male, do you use: condoms _____ withdrawal _____
_____ sexual partner practices contraception

If yes, and you are a female, do you use: diaphragm _____ I.U.D. _____
foam _____ rhythm _____ birth control pills _____
_____ sexual partner practices contraception

Have you taken the birth control pill in the past? YES _____ NO _____

For how long have you been taking the pill? _____

Have you been taking the birth control pill mainly for:

_____ regularity in your menstrual cycle
_____ contraception
_____ other medical reasons

(6)

- To seek pleasure
- Curiosity.
- Social Group pressure.
- To relieve boredom
- As an expression of rebellion.
- For intense personal experience
(To know yourself better).
- For religious meaning or to come
closer to God.
- To make you feel less afraid
or more courageous
- To make you feel less depressed.
- To relieve tension or nervousness.
- To improve your sexual appetite,
sensitivity, or capacity.
- "It just happened" with no active
decision on your part.
- To improve mental capabilities.....

- It might cause an undesirable change
in your personality
Danger of physical harm.
Disinterest.
Would be inappropriate to your re-
sponsibilities to your:
family
career
Your friends would disapprove. . .
It would be incompatible with your
morals
Fear of legal consequences
Lack of opportunity to take the drug

- | | | | | | | | | |
|-------------------|---|---|---|---|---|---|---|---|
| Parent. | . | . | . | . | . | . | . | . |
| Friend. | . | . | . | . | . | . | . | . |
| Doctor | . | . | . | . | . | . | . | . |
| Brother or Sister | . | . | . | . | . | . | . | . |
| Sexual partner, | . | . | . | . | . | . | . | . |
| Other | . | . | . | . | . | . | . | . |

Tobacco
Alcohol
Sedatives
Tranquilizers
Amphetamines:
Oral
Injection
Marijuana
LSD
Mescaline
Other Hallucinogens
Opium
Heroin

(7)

- | | |
|---------------------------|--|
| Great..... | |
| Moderate | |
| Little | |
| None | |
| Never taken the drug..... | |

42. Have your views on a particular drug:
1=not changed at any time
2=undergone a slow change
3=undergone a rapid change

Tobacco
Alcohol
Sedatives
Tranquilizers
Amphetamines:
Oral
Injection
Marijuana
LSD
Mescaline
Other Halluci-
nium
Heroin

- [illegible]

PLEASE READ QUESTIONS CAREFULLY

(8)

49. In comparing life as you know it now to what you expected it to be when you were younger, is it: ☐ better
☐ worse
☐ better and worse
☐ different without being better or worse
☐ the same

Would you have given a different answer to this question one year ago?

YES ☐

NO ☐

50. Are you: very certain fairly certain uncertain
about your life goals ☐ ☐ ☐
about your career goals ☐ ☐ ☐

51. Are your parents in sympathy with your life goals? Yes ☐ No ☐
career goals ☐ ☐
lack of goals ☐ ☐

52. How often have major crises occurred in your life related to:
(1=frequent, 2=infrequent, 3=never)

☐ Your relationship to your family
☐ Your relationships with friends
☐ Your relationship to a lover
☐ Intra-personal problems (your image of yourself, or self-development)
☐ The meaning of life
☐ Your health
☐ Financial problems

53. Who were your guardians during the majority of your adolescent life?
(for example - mother-stepfather; grandparents; mother-father)

-
54. Your parents are: ☐ living and married
☐ living and divorced
☐ father is deceased
☐ mother is deceased

If divorced, your age at time of their divorce ☐.

If deceased, your age at time of his/her death ☐.

55. Your family has lived in the same neighborhood for the past:

less than 1 year ☐ 1-5 years ☐ 5-10 years ☐ 10-20 years ☐

56. The number of times your family has moved that you can recall: ☐

57. Number of younger sisters _____
 Number of older sisters _____
 Number of younger brothers _____
 Number of older brothers _____
58. Family's annual income:
 _____ Under \$5,000
 _____ 5,000-10,000
 _____ 10,000-15,000
 _____ 15,000-25,000
 _____ 25,000-35,000
 _____ over 35,000
59. Were your parents quick _____, average _____, or reluctant _____ to give you medicine when you were sick as a child?
60. Was there any advantage to your being sick? Yes _____ no _____
61. When you were sick as a child, were your parents:
 _____ overconcerned _____ showed an average concern
 _____ very much concerned _____ paid little attention
62. Did you ever have problems eating as a child?
 yes no
 you were a finnickier eater _____
 you had a lack of appetite _____
63. How sensitive are you to criticism from your friends?
 _____ very sensitive
 _____ moderately sensitive
 _____ criticism doesn't bother me
64. Have you ever been arrested?
 _____ No
 _____ For drugs
 _____ For an act of violence
 _____ For demonstrating or another form of civil disobedience
 _____ For drunk driving
 _____ Other
 _____ More than one of the above
65. For each of the following groups, do you: 1=identify with it
 2=have sympathetic feelings
 3=feel indifferent to it
 4=feel alienated and unsympathetic
 _____ Your family
 _____ the student body
 _____ students in your classes
 _____ the people living in your neighborhood
 _____ faculty
 _____ student government
 _____ the administration
 _____ being an American
 _____ traditional middle class values
 _____ Western culture

—	No
—	to the right
—	to the left
—	to the center

 none several
 once many

69. Do you intend to marry at some time? Yes _____ No _____

Brill, N. Q., Crumpton, E., and Grayson, H., "Personality Factors in Marijuana Use." *Archives of General Psychiatry* 2: 163-165, 1971.

Blum, R. H., et al., *Society and Drugs—Drugs I*. San Francisco: Jossey-Boss, 1969.

Blum, R. H., et al., *Society and Drugs—Drugs II*. San Francisco: Jossey-Boss, 1969.

Goode, E., *The Marijuana Smokers*. New York and London: Basic Books, 1970.

Greenwald, B., and Luetgert, M. J., "A Comparison of Drug Users and Non-users on an Urban Commuter Campus." *International Journal of the Addictions* 6: 63-78, 1971.

Imperi, L., Kleber, H., and Davie, J. S., "Use of Hallucinogenic Drugs on Campus," *Journal of American Medical Association* 204: 87-90, 1968.

King, F., "Marijuana and LSD Usage Among Male College Students; Prevalence Rate, Frequency, and Self-estimates of Future Use," *Psychiatry* 32: 265-276, 1969.

King, F., "Users and Non-users of Marijuana: Some Attitudinal and Behavioral Correlates," *Journal of the American College Health Association* 18: 213-217, 1970.

Migner, G. L., Barter, J., and Werme, P. H., "Patterns of Drug Use Among College Students: A Preliminary Report," *American Journal of Psychiatry* 127: 15-24, 1970.

Pearlman, S., "Drug Use and Experience in an Urban College Population," *American Journal of Othopsychiatry* 38: 503-514, 1968.

portion of all these heavy users of dangerous drugs "progressed" to their drugs of choice?

Thus, in this sense, drug progression from marijuana is atypical. It is only because public and official wrath is reserved for some dangerous drugs and withheld from others that the escalation hypothesis is conceptualized in the manner that it is.

The formula and the answers are very different if the equation is considered in a different light, if the concept of "dangerous" includes drugs which are literally dangerous, and not those which the public merely thinks are dangerous. It is because the public conceives of the use of legal drugs as constituting "nondrug" use, as essentially "safe," and as qualitatively different from illegal drug use, that it does not enter into most conceptions of the escalation process. But the similarities in patterns of use of legal and illegal drugs are much stronger than their differences, and it is misleading to consider one aspect of the drug reality, but not another.

In actual fact, marijuana was not a factor in the drug "escalation" of the overwhelming bulk of all users, heavy users, or addicts, of dangerous

drugs in America—only a miniscule fraction could be typified by this pattern. The view that drug users start with an essentially "soft" drug, such as marijuana, and "progress" to increasingly harder drugs, is essentially false.

The pattern much more typically is to start with hard drugs—alcohol and cigarettes—and to "progress" in a variety of ways from there. Our artificial and false conceptions of what is a "hard" drug distort what we will allow ourselves to see as true and real. The reality is considerably more complex than this.

The review of statistically recorded events and associations does provide, however, a valid knowledge base of the behavioral, sociocultural and psycho-social factors and trends which are operating within multiple drug using groups. Knowledge of these associations is necessary for a general understanding of the nature of this phenomena and will allow more accurate studies to be directed toward the identification of possible causal factors. Such knowledge is critical in designing social policy options geared at preventing the spread of irresponsible drug use.

III.

Marihuana and Public Safety

The significant role of the law enforcement community and the popular press in promoting the idea that marihuana use leads to undesirable and antisocial behavior has been discussed in the Report. The purpose of this chapter is to describe the genesis of the perceived problem and the theoretical basis for these allegations.

The early campaigns against marihuana use can be viewed as an extension of the temperance and moral reform movements which swept the country during the 1920's. They were generally spearheaded by persons who opposed the use of opiates, alcohol and tobacco on the grounds that all such substances were physically, mentally and morally debilitating. The presumed dependence of the user on the drug, the loss of self-control and the unhealthy preoccupation with pleasure-seeking activities purportedly induced by these substances were seen as contrary to the traditional values of our society.

Reiteration of these themes by practicing professionals, respected members of officialdom and the popular press ultimately gave rise to what Lindesmith (rev. ed., 1968: 188-189) has termed the "evil causes evil" fallacy, and which Goode (1972) has described as follows:

The impetus behind public and even expert conceptions of drugs and drug use is that a phenomenon so patently

undesirable and universally condemned as the use of narcotics or marihuana must, inevitably, have both pathological causes as well as pathological consequences. Thus, the task of science and medical research is seen as "discovering" these negative concomitants of illicit drug use. In this way, we can all feel better about condemning the phenomenon itself—because our moral and ideological feelings can thereby be backed up and verified by the indisputable data of positive science (p. 1).

This same philosophical leaning of persons who view marihuana as a significant danger to both the individual and society carries with it a corollary that use be prohibited and the user punished.

Perhaps the most persistent controversy with respect to marihuana use is the degree to which it poses a danger to public safety. Public and professional opinion surveys have repeatedly demonstrated the existence of a widespread belief that marihuana use leads to the commission of deviant, delinquent, criminal and violent acts. In addition, some persons have recently expressed concern that marihuana impairs driving skills and performance and, in this way, also constitutes a public safety hazard.

This chapter will review the evidence pertaining to the effects of marihuana on criminal and violent behavior, deviant and aggressive sexual behavior and driving skills and performance. Then an effort will be made to assess both the

nature and strength of the purported relationships between marihuana use and these behaviors.

Problems in Assessing the Effects of Marihuana

The degree to which marihuana constitutes a danger to public safety is dependent, in large measure, upon the drug's observable effects on the behavior of the user. No drug, including marihuana, produces the same effect at all times, under all conditions and in all individuals. Rather, the quality (form and intensity) and the quantity (extent and frequency) of the perceived effects are determined by the complex interaction of both pharmacological and extrapharmacological factors. As Goode (1972) has noted:

We should bear this qualification in mind when looking at the relationship between the ingestion of a drug and any subsequent behavior—with the latter supposedly "caused" by the effects of the drug. Drug effects vary, and, in addition, even standard effects do not automatically translate into specific forms of human behavior (p. 18).

In a paper prepared for the Commission, Tinklenberg (1971: 1-8) has enumerated some of the basic factors which should be taken into consideration in evaluating the relationship between marihuana and crime. They are equally relevant, however, for the assessment of any behavioral effect presumably attributable to marihuana, and for that reason they are summarized below.

Definition and Congeners. The concentration of the principal active chemicals in cannabis (THC and their metabolites) in any given amount of marihuana varies widely according to where the plant is grown, how it is cultivated, harvested and cured. These variations permit a wide range of pharmacological potencies and unknown variations in their effects on behavior.

Drug-Drug Interactions. Given the strong possibility of intentional or inadvertent adulteration of marihuana with other psychoactive drugs, it may be that behavioral changes attributed to marihuana may actually derive from the adulterants or from the interaction of THC and the adulterants (which may well be occasioned by the deliberate rather than unknown simultaneous or sequential use of other psychoactive drugs).

Dose-Response Functions. With respect to the question of how drugs affect behavior, it is likely that marihuana influences behavior in different ways and degrees, depending upon dosage levels. Although it is common to infer that higher doses of a given drug will induce more of a particular

response and lower doses less, such inferences may be inaccurate in that drug effects can show a curvilinear dose-response relationship (as seems to be the case with alcohol).

Time-Action Functions. Time-action function describes the changing effects of marihuana during the course of the drug action. During the brief periods in which the drug effects are most intense, there may be a more pronounced alteration in behavior than during most of the points on the drug time-action continuum.

Individual Variation. Different individuals apparently respond quite differently to the same dose-time factors of marihuana as well as other drugs. In some laboratory studies, where high doses of marihuana induced considerable euphoria and enhanced conviviality in most subjects, a few subjects who received the same dosage in the same setting experienced paranoia, excessive agitation and aggressive tendencies.

Cumulative Effects. The effects of marihuana on individual behavior have been shown to vary according to the amount of previous experience with the drug. There is increasing evidence that chronic users respond quite differently to marihuana than do occasional users. The cumulative extent of previous experience may have an important influence on subsequent behavioral responses.

Psychological and Environmental Variables. The behavioral response to marihuana and to other drugs is at least partially dependent upon such psychosocial variables as the expectations of the user regarding its influence on his behavior. These expectations are in turn derived from the personalities of the individuals involved, recent events in their lives, and the physical, interpersonal and social milieu in which the marihuana use occurs. The behavioral responses to marihuana use are likely to correlate with such psychological and environmental variables quite independently of any pharmacological effects the drug may exert.

Personality Factors. A certain number of individuals in any given population demonstrate characteristic and relatively enduring patterns of antisocial behavior *regardless* of their immediate circumstances, possible drug use and the like. These individuals, variously described as antisocial, criminal or emotionally unstable, typically manifest, from childhood on, recurrent tendencies toward deviance in many areas of life. For some of these people, those predisposed toward *both* criminality and drug abuse, crime and drug use do coexist. However, the assumption that the drug causes crime or vice versa is not necessarily valid. One

should not automatically conclude from this that the use of drugs has *no* influence on their criminal behavior. Drug use may possibly provide a form of reinforcement which may increase or decrease the likelihood of a criminal act.

Crime Process Factors. Crime process factors refer to the complexities of criminal behavior and the possible influence of marihuana on that behavior. A multifactored perspective of the etiology of crime, including personal, social and situational variables, allows for the possibility that at each step in the chain of events leading to the commission of a criminal act, marihuana use may contribute to enhance or diminish the possibility of this outcome.

In short, any interpretation of the data to be presented below which fails to take into account at least some of these variables will likely result in a "post hoc, ergo propter hoc" fallacy—that is, the invalid assumption that simply because one event occurs later than another event (one commits a crime after smoking marihuana) that the latter is *caused* by the former (marihuana caused the crime).

Marihuana and Violence

The popular and professional literature contains numerous unsupported and often emotionally charged accusations regarding marihuana's contribution to violence.

In at least two dozen comparatively recent cases of murder or degenerate sex attacks, marihuana proved to be a contributing cause (Anslinger, 1937).

In a recent study of thirty-seven murders in New Orleans in a year, seventeen were traced directly to marihuana. . . . Evil marihuana is pock-marking this nation with murders, sex attacks, suicides, and crimes in every category from bank stick-ups to petty thievery . . . (LaRoe, 1940).

Marihuana, while giving the hallucinations of cocaine, adds delusions of impending physical attack by one's best friend or close relatives. In addition, marihuana is intrinsically and inherently crime exciting. It has led to some of the most revolting cases of sadistic rape and murder of modern times (Rowell and Rowell, 1939: 67).

Even sex does not satisfy the abnormal urges induced by marihuana. There is still the necessity for further excitement, more emotional release. That is when the guns are grabbed, the knives waved and the razors swung. And all that is a marihuana user's idea of what is normal! (Williams, 1969).

To add greater credibility to their undocumented assertions, some persons describe the manner in which the drug purportedly leads to violence.

In the earliest stages of intoxication the willpower is destroyed and inhibitions and restraints are released; the moral barricades are broken down and often debauchery and sexuality result. Where mental instability is inherent, the behavior is generally violent. An egotist will enjoy delusions of grandeur, the timid individual will suffer anxiety, and the aggressive one often will resort to acts of violence and crime . . . (Anslinger and Tompkins, 1953: 22).

Smoking of the weed is habit-forming. It destroys willpower, releases restraints, and promotes insane reactions . . . Robberies, thrill murders, sex crimes and other offenses result (*New York Daily Worker*, 1940, in Solomon, 1968: 288).

Others simply deny these allegations or assert that there is no evidence to support the thesis of an independent causal relationship.

The fact that so many witnesses testified to the peaceable and orderly character of the excessive consumers goes far to prove that in this country experience shows that as a rule these (hemp) drugs do not tend to violent crime and violence (Indian Hemp Drugs Commission, 1969: 258).

A fair summary of the available evidence would be that very rarely do major (particularly violent) crimes follow upon the use of the drug, and that, in instances where they do, the relationship is an indirect one (Ausubel, 1958: 103).

One likely hypothesis is that, given the accepted tendency of marihuana to release inhibitions, the effect of the drug will depend on the individual and the circumstances. It might, but certainly will not necessarily or inevitably, lead to aggressive behavior or crime (President's Commission on Law Enforcement and Administration of Justice, 1967: 13).

The relationship between marihuana use and the commission of aggressive acts or violent crime such as murder, rape and assault remains one of the most controversial issues relating to the drug. Persons who believe that such a relationship exists often argue that marihuana triggers the release of inhibitions and restraints, destroys the will power and heightens aggressive tendencies in the user, serving as a catalyst for the commission of aggressive or violent acts.

This argument raises several fundamental questions: Are the effects presumably induced by the drug commonly experienced by marihuana users? Are these effects, to the extent that they do occur, generally or frequently translated into overt behavior? And is the behavior which presumably manifests itself ordinarily violent or aggressive?

The answers to these questions may be obtained from several sources, including the results of laboratory experiments designed to measure certain physiological and psychological reactions and to identify observable behavioral effects; and retrospective self-reports of effects purportedly experienced by marihuana users. Additional clues may be gained from examination of the criminal records of known marihuana users and the incidence

of marihuana use among persons arrested for or convicted of violent crimes. However, while these latter methods may reveal statistical associations (which could prove to be spurious upon further analysis), they should not be interpreted to demonstrate the existence of a causal connection between marihuana use and the offenses committed.

THE VIOLENT AND CRIMINOGENIC EFFECTS OF MARIHUANA¹

The empirical evidence gathered to date lends no support to the hypothesis that marihuana heightens aggressive tendencies in the user or that its effects significantly increase the likelihood of inciting the user to violence or crime. However, those findings summarized below do not mean that marihuana *cannot* be related to aggressive or violent behavior but merely suggest that the effects of the drug and the behaviors in question may operate independently.

The Mayor's Committee on Marihuana (1944) studied the psychomotor effects of marihuana on 12 prisoners, both users and non-users. Marihuana was administered experimentally as both an oral extract and as cigarettes. The data show that the degree of the drug's effect on psychomotor activities is dependent upon the complexity of the function and, in some cases, on the strength of the dose administered. Although simple reaction time and tasks were only slightly affected, more complex functions like static equilibrium and body and hand steadiness were significantly and adversely affected by both large (5 cc.) and small (2 cc.) doses of the drug.

In contrast to the ability of amphetamines to enhance muscular performance and to increase physical activity (Weiss and Laties, 1962; Tinklenberg and Stillman, 1970), marihuana has been found to decrease the inclination toward physical activity and to actually reduce both physical exertion and activity (Mayor's Committee on Marihuana, 1944; Hollister, et. al., 1968; Hollister, 1971), thereby decreasing the probability of inciting the user to assaultive behavior.

Although marihuana has been found to reduce inhibitions in some persons, it has not been shown to exaggerate extant aggressiveness to any appreciable degree; in some instances it has, in fact, been shown to reduce aggressiveness, and to induce timidity, fear and passivity in the user (Bromberg,

¹ The evidence to be presented here applies not only to aggression and to violence but to marihuana's relationship to crime in general, and is therefore equally relevant to a later section on marihuana and non-violent crime. The effects of marihuana on sexual behavior, including the commission of sexual offenses will be treated in the following section on marihuana and sexual behavior.

1934, 1939; Chopra and Chopra, 1939; Allentuck, 1942; Chopra and Chopra, 1942; Charen and Perelman, 1946; Carstairs, 1954; Blumer, et. al., 1967; National Institute of Mental Health, 1970, 1972).

In recent years, a number of studies have been conducted in which marihuana users were asked to describe the effects they experienced while under the influence of the drug. On the whole, their findings are similar to those obtained from the results of laboratory experiments.

Halikas, Goodwin and Guze (1971) found that the majority of the users in their sample reported "usually" feeling relaxed (79%) and peaceful (74%).

Tart (1971) administered a questionnaire to college students in California, one item containing a list of 206 possible effects of marihuana. Respondents were asked to indicate whether, within the last six months, they had experienced the designated effects never, rarely, sometimes, very often or usually. Of the 153 respondents, 69% gave one of the latter three responses to the item: "My inhibitions are lowered so that I do things I'm normally inhibited to do."

To the item: "I lose control of my actions and do antisocial things (actions that harm other people) that I normally wouldn't do," 22% said rarely, 1% said sometimes, and the remaining 77% replied "never." With respect to other more specific effects, 23% of the users stated they "usually" felt physically relaxed, and 49% said they "very often" felt physically relaxed and did not want to get up or move around when high on marihuana (pp. 703-704).

In a study by Brotman and Suffet (1970) of 74 users in New York City (both students and non-students) no one mentioned any hostile feelings or actions when asked to describe what happens when they get high on marihuana (p. 264).

Goode (1970) asked 204 respondents to describe their experiences when high on marihuana. Table 1 illustrates the responses of the users to effects possibly related to aggression or crime (pp. 153-54).

In a more recent, Commission-sponsored survey of 15 to 34 year old male residents of Philadelphia, respondents were interviewed about the extent and frequency of their marihuana use, the extent to which marihuana figured in the commission of criminal or delinquent acts and the effects they generally experienced while under the influence of the drug (Goode, 1972). With respect to the effects experienced, nearly all the marihuana users (about 75% of the total sample reported that they had tried marihuana at one time or another) denied that the effects of marihuana on them

Table 1.—CRIMINOGENIC AND AGGRESSIVE EFFECTS
OF MARIHUANA

(Figures in Percentages)

More relaxed, peaceful, calmer; marihuana acts as a tranquilizer.....	46
Exaggeration of mood; greater subjective impact, emotional significance.....	25
Time seems slowed down, stretched out, think more time has passed.....	25
Become more withdrawn, introverted, privatistic.....	22
Become tired, lazy, lethargic, don't want to move.....	19
Feel freer, unrestrained, uninhibited.....	18
Feel paranoid.....	15
Have hallucinations.....	15
Feel sleepy.....	14
More uncoordinated, clumsier, motor skills impaired.....	9
Other people annoy me more; find fault in others.....	8
Become more active, want to move around more.....	6

could be interpreted as criminogenic or violent in nature. Table 2 below presents the subjective effects of marihuana related to crime and violence which were reported by the 559 respondents.

The data show that the overwhelming majority of the respondents report "never or almost never" experiencing effects which can be characterized as producing frustration, anger, or aggression, and that they usually do not experience effects which could be taken to indicate an increase in suggestibility. On the other hand, substantial proportions of the respondents reported feeling relaxed (72%), less angry (53%) and drowsy or sleepy (47%) at least half of the time.

In sum, these data suggest that marihuana does

Table 2.—REPORTED EFFECTS OF MARIHUANA AS
RELATED TO CRIMINAL AND VIOLENT BEHAVIOR

(Figures in Percentages)

Effects reported	Almost all the time	More than half the time	Less than half the time	Never or almost never
Feeling of wanting to hurt someone.....	(*)	0	3	96
Feeling of wanting to do something violent..	(*)	(*)	4	95
Feel more angry.....	1	3	8	88
Feeling of frustration....	3	4	16	78
More willing to follow others' suggestions...	4	12	25	59
Care less what others think of what you do..	16	18	10	18
Feeling of being able to do anything.....	6	5	13	77
Have hallucinations.....	9	8	16	66
Feeling of relaxation....	50	22	10	18
Feel less angry.....	31	22	13	34
Feeling of drowsiness or sleepiness.....	22	25	25	27

* Less than ½ of one percent. Source: Goode, 1972: 21.

not commonly produce effects which are likely to increase aggression or incite the user to violence. Numerous studies designed to assess the relationship more directly demonstrate, on the whole, that marihuana does not play a significant role in the commission of violent crimes.

MARIHUANA AND VIOLENT CRIME: THE EVIDENCE

Over the years a number of approaches have been utilized in an effort to assess the relationship between marihuana use and violent crime. Perhaps the simplest approach is to compile a list of violent offenses allegedly committed by marihuana users and to establish, retrospectively, the role of marihuana in the commission of these offenses.

The Indian Hemp Drugs Commission (1894) for example, investigated 81 cases of violence allegedly caused by hemp drugs in an effort to determine whether or not a causal relationship existed. Of these 81 cases, 11 were too old to permit adequate investigation. In 23 of the cases examined, however, 18 showed no evidence of a connection between the crimes and the use of hemp drugs. The Commission concluded that:

In respect to his relations with society, however, even the excessive consumer of hemp drugs is ordinarily inoffensive. His excesses may indeed bring him to degraded poverty which may lead him to dishonest practices; and occasionally, but apparently very rarely indeed, excessive indulgence in hemp drugs may lead to violent crime. But for all practical purposes it may be laid down that there is little or no connection between the use of hemp drugs and crime (Indian Hemp Drugs Commission, 1893-1894 reprinted 1969: 264).

Similarly, in 1938 the Foreign Policy Association published the accounts of 10 marihuana crimes, including murder and assault, "culled at random from the files of the U.S. Bureau of Narcotics" (Merrill, 1938: 28). These cases were presented in such a way as to imply that marihuana caused the offenses. According to Grinspoon (1971: 302), they "gave the reader the distinct impression that the user of marihuana was a violent criminal who was given to rape, homicide, and mayhem." Bromberg (1939), however, questions the validity of the causal assumption.

It is difficult to evaluate these statements, because of their uncritical nature. . . . Among the ten patients, the second, J. O., was described as having confessed how he murdered a friend and put his body in a trunk while under the influence of marihuana. J. O. was examined in this clinic (Bellevue Hospital); although he was a psychopathic liar and possibly homosexual, there was no indication in the examination or history of the use of any drug. The investigation by the probation department failed to indicate use of the drug marihuana. The deceased, however, was addicted to heroin (p. 9).

Based on retrospective case analyses, some ob-

servers have attempted to specify more precisely the nature of the purported relationship or the situations in which aggressive behavior may result from marihuana use. Bromberg (1939), for example, suggested that aggressive or violent behavior may arise when a naive subject develops a panic state in response to marihuana-induced hallucinations. Allentuck and Bowman (1942) believed that aggressive or antisocial behavior following use may occur as a reaction to some unpleasant external stimulus during the phase of hypersensitivity and heightened psychomotor activity. Others have suggested that antisocial conduct of an aggressive or violent nature may occur when marihuana is used, as alcohol often is, to release repressed feelings of hostility (Siler, et al., 1933; Chopra and Chopra, 1939; Allentuck and Bowman, 1942; Freedman and Rockmore, 1946; Murphy, 1963), and to serve as a fortifier for aggressive or violent crimes (Ewens, 1904; South Africa Interdepartmental Committee on Abuse of Dagga, 1952; Ames, 1958; Watt, 1961; Blumer, et al., 1967; Miller, 1968).

The available evidence bearing on these issues, however, suggests that panic reactions rarely occur; that psychomotor activity is more often reduced than enhanced following use; that aggression rarely follows use, but when it does, it generally occurs among individuals with histories of maladjustment, emotional instability or impulse disorders (Bromberg, 1934, 1939; Charen and Perelman, 1946; Ausubel, 1958; Bloomquist, 1968; Grinspoon, 1971; Kaplan, 1971; National Institute of Mental Health, 1972).

After a series of studies of marihuana and crime, Chopra and Chopra (1939) concluded that if any relationship existed between marihuana use and violent crime, it was an indirect one. They stated that:

So far as premeditated crime is concerned, especially that of a violent nature, hemp drugs . . . may not only not lead to it, but they actually act as deterrents. . . . One of the important actions of these drugs is to quieten and stupefy the individual so there is no tendency to violence. . . . The result of continued and excessive use of these drugs in our opinion is to make the individual timid rather than lead him to commit a crime of a violent nature (p. 92).

Over the years, the conclusion of the Chopras has received increasing support from many quarters of the research community (Mayor's Committee on Marihuana, 1944; Maurer and Vogel, 1962; White House Conference on Narcotic Drug Abuse, 1962; Murphy, 1963; President's Commission on Law Enforcement and Administration of Justice, 1967; National Institute of Mental Health, 1970, 1972).

In the absence of possibilities for addressing the issue more directly, several researchers have relied on statistical studies and have sought to establish the overall and comparative incidence of detected violent crimes among cannabis users. One method has been to compile lists of violent crimes committed during specific periods of time and to determine the proportion of these offenses committed by cannabis users.

Lambo (1965) compiled a list of crimes occurring in three West African countries during a recent two-year period. He claimed that users of cannabis had committed 51% of the 73 murders, 31% of the 263 cases of assault and battery and 26% of the 472 cases against women.

Some have preferred to base their statistical studies on samples of offenders (rather than lists of offenses) drawn from the arrest or conviction files of law enforcement agencies. Several researchers adopting this method are content to identify the marihuana users in their samples and then simply report the number of users charged with violent crimes or the proportions of the total number of violent crimes perpetrated by the users.

The District Attorney of New Orleans, for example, testified before the House Ways and Means Committee that of the 450 men convicted of major crimes in 1930, 125 were identified as regular marihuana users. Approximately one-half of the murderers and one-fifth of those charged with assault, robbery or larceny were said to be regular marihuana users (U.S. House of Representatives, 1937: 23-24).

Bromberg (1939) reviewed the records of 16,854 offenders in the psychiatric clinic of New York County's Court of General Sessions during the period 1932 to 1937. Of the 67 marihuana users identified, only six had been charged with violent crimes. He concluded that there was no causal relationship between marihuana use and aggressive crime.

Others go one step further and attempt to compare the users' rates of violence with those of other selected populations such as non-marihuana using offenders, offenders using other drugs, or all offenders in a given file.

Bromberg and Rodgers (1946) studied the civilian and military criminal records of 8,280 convicted offenders at the United States Naval Prison in Portsmouth, New Hampshire between January 1, 1943 and July 1, 1945. Of the total number of offenders investigated, 40 or .0048% were identified as marihuana users (23 used to excess, 10 were moderate users and seven were described as light users). Of these 40, only two reported being more aggressive while under the influence of marihuana than they would be under normal conditions and

three had been charged with violent crimes (assault or striking an officer) while in the military. Comparison of the users' criminal records with those of 40 randomly selected non-using prisoners revealed that the non-user group had committed more aggressive crimes than the users.

In conclusion, the researchers stated that:

1. There is no positive relationship between aggressive crime and marihuana usage in the Naval service; . . . 2. . . . there is no significant causal relationship between aggressive crime in civilian life (of the naval offenders studied) and the use of marihuana 3. Marihuana usage is but an aspect of some type of mental disorder or personality abnormality (p. 828).

Maurer and Vogel (1962) have stated a similar conclusion.

"It has not been our impression from contact with many hundreds of marihuana users that these people are violent criminals; . . . While there may be occasional violent psychopaths who have used marijuana, have committed crimes of violence, and who have, in court, explained their actions as uncontrolled violence resulting from the use of the drug, these are exceptions to the general run of marijuana users. . . . Marijuana is not possessed of any mysterious power to force people to commit acts which they would not otherwise perform (p. 281).

Blum (1969) reviewed the data provided in 1966 by the Federal Bureau of Investigation as part of its Careers in Crime Project. The data showed that marihuana users did not differ significantly from either heroin users or from all offenders (drug and non-drug users) in their rate of violent crime relative to their total non-drug offenses (28%, 26% and 26%, respectively).

There have been several statistical studies, also using offender populations, designed to assess the degree to which persons arrested for cannabis use have previous or subsequent arrests for violent crimes.

Bromberg and Rodgers (1946) found that of the 40 offenders in their sample identified as marihuana users, 12 had been charged with previous offenses, three of them for assault.

Gardikas (1950) reviewed the criminal records of 379 persons arrested between 1919 and 1950 for publicly using hashish. Of these, 117 (31%) reportedly progressed from hashish use to other crimes, about one-third of these subsequent crimes involving violence or weapons. Gardikas stated that one subgroup of these offenders accumulated 420 offenses of assault, woundings, threats, robberies, and manslaughter (p. 5).

In sum, these statistical studies based on samples of violent offenses, violent offenders or arrested marihuana law violators indicate that some individuals identified as marihuana users do commit violent crimes, have committed them in the past and go on to commit them in the future.

Their numbers, however, are generally small, both absolutely and relatively. These studies therefore suggest a very weak and insignificant statistical association between marihuana use and violent crime which may itself be completely attenuated when the proper statistical controls are applied.

These studies do not establish a causal relationship between cannabis use and violent crime; nor do they permit an affirmative response to the crucial question of whether the use of marihuana alters the progression to violent crime at a significantly greater rate than that which might be expected from some other criminal subgroups, more representative samples of cannabis users, or samples drawn from the general population. They also fail to address themselves to the external conditions and circumstances which might serve to mitigate the observed relationships.

Several recent and more sophisticated empirical investigations have addressed some of the critical questions left unanswered by statistical studies of offender populations. Namely, they set about to determine whether marihuana users in the general population commit acts of aggression or violence significantly more frequently than do non-users; and whether any observed differences between users and non-users may be more directly attributable to extra-pharmacological (social, cultural, psychological) variables than to the use of marihuana itself or to the pharmacological action of the drug per se.

In 1965, Robins and his associates (1970) conducted a survey of 20 black men born in St. Louis between 1930 and 1934. The marihuana users in the sample were then compared with the non-users relative to their ratings on a "violence syndrome" constructed by the researchers.

Respondents were rated high on the violence syndrome if they reported having participated or felt like participating in three or more of the following items, one of which was a judgment by the interviewer that the respondent demonstrated hostility during the interview:

1. Getting hurt in a fight.
2. Ever feeling like killing someone.
3. Ever hitting people when angry.
4. Being quick to lose one's temper.
5. Throwing or breaking things when angry.
6. Ever hurting someone in a fight.
7. Ever fighting with a weapon.
8. Getting mean when drinking.
9. Interviewer's observation of respondent's hostility.

The researchers found that those who had used marihuana during adolescence were more likely to score high on the violence syndrome than were

those who did not use the drug for the first time until adulthood; 31% of the respondents who had used marihuana and no other drug during adolescence exhibited three or more of these measures, 24% of those who used marihuana only but started as adults scored high, 16% of the non-users were classified as high on the violence syndrome, and 45% of those who used marihuana and other drugs were so classified.

The researchers also found that users were significantly more likely to report the commission of "adult person or property offenses" than were non-users; 32% of the non-users, 48% of the marihuana only adult starters, 56% of the marihuana only adolescent starters, and 77% of the multiple drug users reported committing crimes against persons or property as adults.

Based on these data, marihuana users were said to be significantly more likely to have exhibited violent behavior than were non-users. This conclusion, however, seems somewhat premature.

First, upon the application of three "pathological" controls (dropping out of school, alcoholism and involvement in juvenile delinquency), the original relationship was reduced to some unspecified extent; the researchers reported only that these controls "failed to completely wipe out" the statistical correlation. Secondly, several of the items would not appear to be sufficiently discriminating in that large numbers of people, whether drug users or not, have probably been quick to lose their temper, hit people when angry (most parents, for example), or felt like killing someone in a moment of anger. The subjective nature of the last item—the interviewer's observation of hostility—has already been noted.

Thirdly, neither the drinkers nor those who were multiple drug users were isolated in the analysis, making it impossible to determine whether or not the apparent relationship between marihuana use and violence may have been a function of these other drugs rather than the marihuana.

Lastly, but perhaps most importantly, the researchers found several other "pathological" variables correlated with the use of marihuana in their sample: (a) low income, (b) low status jobs, (c) unemployment, (d) receiving financial aid, (e) failing to graduate from high school, (f) fathering illegitimate children, (g) marrying women who had been married previously or who had children, and (h) drinking "heavily enough to create social or medical problems."

Because none of these variables was controlled in the data analysis (despite the fact that most of them have been found to be significantly related to delinquency and crime and characteristic of

persons involved in delinquent, criminal and drug subcultures), it is impossible to determine whether or not any or all of these variables played a mediating role in the observed relationship between marihuana use and antisocial behavior in the sample. As Goode (1972) has noted, the fact that the three controls which were applied did reduce the relationship, makes it likely that "additional controls would reduce the relationship even more, indeed, reduce it to zero, if applied simultaneously" (p. 13).

As such, although this study represented a significant step forward in investigating the relationship between marihuana and crime or violent behavior, its methodological limitations preclude generalizations of the findings to the larger universe.

In a study of drug use among lower class minority group youth, Blumer and his associates (1967) found that marihuana users were much less likely to commit aggressive or violent acts than were those who used amphetamines or preferred alcohol, and that most of the marihuana using youths deliberately shunned aggressive behavior and adopted, instead, a "cool," non-violent style. The researchers did find a small group of youths (termed "the rowdy") who were oriented toward aggressiveness. Generally, these youths preferred alcohol over other drugs and were found, for the most part, to have been raised in an aggressive and combative social milieu. The researchers point out, however, that most marihuana users in the sample were not of the rowdy type, even though it is this small group which often forms the basis of the public and police image of the youthful marihuana user. In commenting on the role of marihuana in the passage of youth from rowdy to a cool style, the authors note that

The passage from the rowdy type to a cool and mellow youngster, as it relates to the use of drugs, involves chiefly a shift to the smoking of marijuana. . . . [The youngsters'] accounts and discussions also stress that the use of marijuana both produces and symbolizes a "mellow" mode of conduct that is opposed to that associated with rowdy behavior. They place great weight on the "socializing" effects of marijuana use, declaring that its use not only leads youngsters away from violence but has the effect of changing them into social human beings (p. 30).

In a large scale, systematic survey (questionnaire and interview) of more than 1300 students at five West Coast colleges and universities, Blum and his associates (1969) found that 19% of the total sample had used marihuana but that 94% had used alcohol. One percent of the marihuana users reported fights or other criminal behavior which they attributed to the drug. Of those who used alcohol, 8% reported fights and 2% reported

offenses while under the influence of this drug. The researchers make particular note of the fact that despite the increase of marihuana use on these campuses since the middle and late sixties, there has been no comparable increase in assaultive crimes.

In a Commission-sponsored household survey of 15 to 34 year-old male residents of West Philadelphia, Goode (1972) found that not one of the violent crimes, including "forcing sexual intercourse," was significantly correlated with marihuana use. Among the five offense types showing a very weak relationship to the use of marihuana, the only so-called violent offense, "hurting someone in a minor way," showed the weakest association. The author notes that "the statistical differences in rates of offenses between users and non-users rest on adding together a small number of weakly correlated offenses. . . . [They do not indicate] massive differences, or differences indicating higher rates of classic, violent crimes among users" (p. 32a).

These more rigorous studies of the relationship between marihuana use and violent crime suggest that marihuana users in the general population do not commit acts of aggression or violence significantly more frequently than do non-users; that marihuana does not heighten aggressive tendencies in most users and may, in some cases, serve to reduce aggressiveness; and that much of the observed relationship between marihuana and violence is probably a function of social, cultural or psychological variables such as multiple drug use, set and setting and involvement in a criminal or drug subculture.

There is no reason to believe that marihuana use will cause or lead to the commission of aggressive or violent acts by the large majority of psychologically and socially mature individuals in the general population.

OPINIONS ABOUT MARIHUANA AND AGGRESSIVENESS: THE LAW ENFORCEMENT AND CRIMINAL JUSTICE COMMUNITIES

Several references have already been made to anecdotal case histories, to the claims made and to the opinions formerly held by a number of law enforcement authorities relative to the relationship between marihuana use and aggressive behavior or violent crime. A few systematic efforts have been made to explore the current opinions and attitudes of law enforcement and criminal justice officials.

Probably the first detailed survey of the opinions of police officers was that conducted by a Stanford University law student in 1968. Part of

this unpublished study has been summarized by Kaplan (1971) and is reprinted below.

Law enforcement agencies have continuously supported the existence of a strong causal relationship between the use of marijuana and acts of aggression and violence. In order to determine the nature and basis for this belief, sixteen law enforcement and narcotics officers were interviewed. The officers selected for the interview from each police department were those who spent the largest percentage of their time actually working with marijuana users. When the department had several officers working full time on narcotics, the officer in charge was interviewed, on the supposition that as chief officer, he would have the longest and widest range of experience with marijuana users.

Of those interviewed, seven spent 100% of their time on narcotics problems; three spent 75% to 100%; 1 spent about 50%; and the remaining five spent 10% to 25%. All emphasized that of their narcotics work, a major proportion of the time is spent on marijuana problems.

The context in which the officers observe individuals under the influence of marijuana is an important factor in evaluating their observations. Only three had done stake-out work where conduct could be observed while under cover. The remaining thirteen officers had only encountered marijuana users in either arrest or questioning situations. In response to the question of whether they had opportunities for informal contact with people using marijuana while off duty or in a social situation, the officers uniformly answered, "no."

The specific subject of this project, i.e. marijuana and aggression, was never mentioned to the officers. They were told only that I was interested in the marijuana question. The first question which I asked was to briefly characterize, from their *personal* experience and observations, the behavior of individuals while under the influence of marijuana. During this original description, 10 of the officers mentioned violence or aggressive behavior as a common characteristic. The six other officers didn't mention aggression as a distinguishing characteristic in their original description; however, in the next question, when specifically asked if marijuana does lead to aggressive behavior, all said that it did.

Every one of the officers pointed out the wide range of conduct which they see exhibited by those that are "high" on marijuana. They emphasized that how a person reacts depends on his particular personality. As one officer commented, "Some individuals are very happy and to them everything is beautiful, while others are always looking for a fight." Six (6) of the officers emphasized how quickly they can see one mood change into the other—at one moment docile and passive, at another extremely aggressive.

A few of the officers commented that along with the direct influence of marijuana, another important factor in aggressive behavior is the arresting situation. One officer, Lieutenant A of the B Police Department, who has done quite a bit of stake-out work as well as undercover investigation, pointed out that this change from "silly, joking, funny and talkative" moods to apprehensive and often aggressive postures is many times precipitated by the realization that a law enforcement officer is present.

Sergeant C of the D Police Department also felt the "arresting situation" was probably the primary factor in aggressive behavior reports about marijuana users. Sergeant E also mentioned "the approach of a known policeman" as a factor in the aggressive behavior which they see. However, Sergeant E also estimated that one fifth

of the males, when under the influence of [marijuana] and when aware that they are being arrested, will break and run or resist. This he feels is a much higher percentage than for other types of arrests. Similarly most of the officers did maintain that even considering all other factors such as arrest, the marijuana was the force in most cases which was responsible for the aggression and violence.

Mr. F of the G County Sheriff's Office, however, maintained that in the last few years, those arrested for marijuana offenses have tended to resist arrest less often than previously. He stated, "They now feel they don't have to fight the officers because of the laws—because of legalizing attempts, they feel they don't have to fight, for they will have their day in court."

Sergeant H of the I Police Department stated that recently (within the last year) he has seen no aggressive reaction to marijuana because of the extremely weak grades of marijuana now available. He felt that the determinative factor in how a person reacts while "high" is the strength of the grass smoked. He reported that the grass they have recently been finding has a very low resin content and its effects are merely "a quick stimulant followed by a depressed mood." However, in another part of the interview, when discussing the type of personality prone to using marijuana, Sergeant H distinguished between those now smoking and the "old grasshead." These latter were only "Spanish-American or criminals." Now, however, "people without criminal records are joining the ranks of criminals." This major shift in the personality type now using marijuana, it would seem, would be another factor leading to Sergeant H's observation that the problems with aggressive reactions have decreased.

While all stated their belief that marijuana does lead to aggressive behavior, it was in most cases very difficult to elicit from the officers any specific instances where they personally had observed an aggressive reaction to the use of marijuana. Four (4) officers stated that they had never personally seen someone aggressive under marijuana. They all, however, had heard reports of such instances from other officers. It should be noted also, that these four officers are from small police departments located chiefly in middle class residential areas.

The officers who did cite specific examples of aggressive behavior from their personal observations cited such conduct as individuals who possessed marijuana fighting among themselves, cases of resisting arrest, a [man] picking a fight in a bar, beating one's wife, sexual promiscuity, stealing, reckless driving, and carrying knives and guns. While citing this type of example most officers emphasized the real difficulty in telling when someone is "high." Except for a few symptoms such as red or dilated eyes, they have to make the judgment from the general actions of the subject. When the subject is acting peculiar and there is no alcohol, or they find marijuana in his possession, then they assume he is "high."

It was also difficult to limit these discussions solely to marijuana. When asked for personal case histories, they often recounted incidents of individuals who had also been using other drugs or alcohol in combination with marijuana. The officers tend to group all of the drugs together, and discuss them together in generalities applying to all. One officer, from J County, recounted as one of his personal experience histories with aggression and marijuana, a boy who went "berserk" on Christmas day, and who finally had to be shot by the police. On checking newspaper accounts, it appears that LSD was also involved in the episode.

The officers all indicated that they have personally seen many aggressive reactions to the use of alcohol. Most,

however, did not feel they could compare the frequency with that of marijuana. Most deal mainly with narcotic problems and thus spend most of their time with marijuana problems. The alcohol problems, and specifically the aggressive or belligerent drunk, are handled by the "beat" cops.

It was also difficult to limit the discussion to personal experiences of the officers themselves. Many of them, when asked for specific examples, went immediately to their desks for reports and articles issued by other law enforcement agencies. This it seems is a problem which developed because of the sample chosen to interview. Because they were usually the most experienced and the chief narcotics officers, most of them are called upon to give speeches before PTA's, church groups, school classes, etc. They all, therefore, were familiar with the literature distributed by law enforcement. . . .

Three of the officers cited as proof of marijuana's danger a recent distribution which pointed out that the "death penalty" is now imposed on marijuana offenders in Nigeria.

When questioned on passive reactions to marijuana, all of the officers could think of personal encounters with people who were "high" and who were decidedly passive and docile. Yet only four of the officers included this trait in their original characterization of behavior under marijuana. Eight of the officers, however, in their original description of behavior while "high" described some persons as "happy," "funny," or "giggly."

One question asked of the officers was aimed at differentiating the aggressiveness (chiefly in terms of frequency of resisting arrest) between those "high" on marijuana and those arrested for sale or for possession. As mentioned previously, the officers indicated that generally they have a very difficult time distinguishing those who are "high." The officers interviewed generally work on [arresting] pushers, and dealers. Their attention is usually not drawn to individuals because of the particular conduct they might be exhibiting, but rather because the individual is dealing in marijuana. When pot parties where everyone is high have been [broken up], Sergeant O of D reported that the places raided have usually been on the peaceful side. Another officer, K, on the narcotics detail in D, felt that users are usually "very easy to arrest. With others, such as pushers, and sellers, however, officers have to be more careful." Captain L of M disagreed, however, maintaining that those under the influence must be watched more closely and are usually more aggressive and violent because of a lessening of concern for the consequences and a lack of ability to make sound judgments. Deputy Chief N of the O Police Department pointed out that in O at any rate, there is a certain "show" which those arrested feel they must put on; "it is hard to separate this show from the effects of the marijuana." Lieutenant P of the O Police Department said his experience indicated that those under the influence had to be watched closely. He has arrested people, [when they were] "high" three or four times without incident; the fifth time, however, he felt they might go wild.

In response to a question of whether they felt that some persons smoke pot before engaging in crimes against property, such as robbery, ten of the officers replied that they did believe that this occurred often. Seven of these could cite specific examples of people who had been picked up for stickups, car thefts, etc. and who reported using marijuana beforehand to bolster their courage, or sharpen their senses. However, the other three of the ten had only heard of such conduct. The remaining six officers answered

that they did not think this was common, and had never seen any examples. . . .

None (of the officers) believed however that marijuana was responsible for any long-term effects resulting in aggressive behavior. The relationship between marijuana and aggression, they feel, is limited strictly to the period of time during which the user is under the influence. In terms of long-range effects of marijuana on aggression, the reactions of the officers confirm that, if anything, there is a negative correlation. That is, marijuana leads to non-aggressive, non-competitive, passive conduct, when viewed in the context of chronic use.

Whatever limitations and qualifications one can cite regarding the conclusions drawn by law enforcement officers, one thing remains certain: they do believe that the use of marijuana leads in a significant number of cases to aggressive behavior (Kaplan, 1971, citing Schofield: 110-115).

In seeking to present to the public as much information about marihuana and its effects, from as many different sources and approaches as possible, the Commission sponsored the design and execution of two opinion surveys of the criminal justice community. In addition to soliciting their current opinions about the relationship of marihuana to aggressive or violent behavior, and to infer from them the extent to which their professional experience with marihuana users may have changed over the years, the Commission sought to determine the extent to which current opinions and attitudes of the criminal justice community reflect the growing body of empirical evidence on the subject.

To these ends, nationally representative samples of prosecuting attorneys, judges, probation officers and court clinicians were surveyed by mail. The questionnaires mailed to these officials contained items relative to the relationship between marihuana use and aggressive or violent behavior. The results of these surveys show that more than three-fourths of the 781 judges, probation officers and court clinicians responding to a mail survey (InTech, 1971) regarded as either questionable or "probably untrue" the statement that "most aggressive acts or crimes of violence committed by persons who are known users of marihuana occur when the offender is under the influence of marihuana. More than 60%, however, regard as equally questionable or untrue the statement that most such aggressive acts or crimes of violence occur when the offender is *not* under the influence of the drug but is attempting to obtain it or the money to buy it. Table 3 shows the percentage of each of the three groups of respondents answering in this manner. (InTech, 1971).

These figures give the impression that neither judges, probation officers nor court clinicians are certain of the role of marihuana in the commission of violent crime. Their tendency to deny both

Table 3.—CRIMINAL JUSTICE OFFICIALS' BELIEFS ABOUT THE RELATIONSHIP OF MARIHUANA USE TO AGGRESSIVE ACTS

(Figures in Percentages)

A. "Most aggressive acts or crimes of violence committed by persons who are known users of marihuana occur when the offender is under the influence of marihuana."

	Probably true	Probably not true	Not sure
Judges.....	17.3	44.2	29.5
Probation officers.....	14.5	60.0	21.8
Clinicians.....	6.1	76.5	13.0
Total.....	15.2	51.2	26.0

B. "When the offender is not under the influence of marihuana but is attempting to obtain marihuana or the money to buy it."

	Probably true	Probably not true	Not sure
Judges.....	35.6	30.6	25.0
Probation officers.....	27.3	44.5	21.8
Clinicians.....	20.0	60.9	15.7
Total.....	32.1	37.0	23.2

statements suggests that at the least, the relationship, to the extent that it does exist, is a tenuous one.

In its survey of state prosecuting attorneys, the Commission likewise found a tendency for these officials to deny a causal relationship between marihuana use and aggressive behavior; 52% of the respondents stated that they either did not believe or were uncertain about the proposition that use of marihuana causes aggressive behavior. Of those who did believe in a causal relationship, however, two-thirds of the respondents' beliefs stemmed from other than personal observation of aggressive behavior exhibited by marihuana users.

These opinion surveys reveal that at least these members of the criminal justice community have begun to reexamine their earlier beliefs. The data suggest that, in their professional experience, they have not found marihuana users to be aggressive or violent to such an extent as to elicit strong and consistent opinions about the causal relationship between marihuana use and violence.

Marihuana and Sexual Behavior

Since the mid-1930's, Americans have, at one time or another, either acclaimed or decried mari-

huana as an aphrodisiac, lauded its ability to intensify and enhance enjoyment of sexual experiences and accused it of heightening sexual aggression and inciting the commission of sexual offenses. Even today, there is no consensus among Americans regarding what they consider to be the effects of marihuana on sexual desire, arousal and performance. Rather, what evidence exists on the subject continues to reveal the existence of diverse and often inconsistent beliefs and experiences.

Society's concern about the effects of marihuana on sexual behavior, however, does not generally center on the drug's inherent ability to produce or heighten sexual arousal *per se* but on the relationship between sexual arousal and the likelihood of sexual excess on the part of the user. The key question is the extent to which and the conditions under which marihuana acts as a catalyst to sexual aggression, profligacy, promiscuity and other aberrant sexual behavior.

MARIHUANA AND PSYCHOSEXUAL STIMULATION

The numerous medical and clinical observations, experimental investigations and survey studies reviewed by the Commission show that the belief regarding the stimulant effects of marihuana and the use of hemp drugs to achieve sexual arousal, the improvement of sexual powers and the prolongation of coition have existed for centuries and have been documented (Chopra and Chopra, 1939; Bouquet, 1950; Robinson, 1967; Grinspoon, 1971); The proportion of the population actually aroused sexually by marihuana, however, is difficult to assess. Relevant research findings are based on widely divergent research procedures, differing criteria of arousal, and variations in the amount of arousal experienced. Nonetheless, it is fair to state that marihuana produces heightened sexual interest, desire and arousal in substantial proportions of both male and female users (Bromberg, 1934; Allentuck, 1944; Johnson, 1968; Goode, 1969; Hochman and Brill, 1971). It is equally accurate to state, however, that marihuana does not increase and in fact may decrease sexual desire or stimulation in significant proportions of users (Walton, 1938; Chopra and Chopra, 1939; Taylor, 1963; Brenner, Coles and Meagher, 1970; Goode, in press). At best, the available evidence is inconclusive.

In a study of regular marihuana users conducted by three physicians, for example, "heightened sexual feeling" and "increased sexual arousal" while under the influence of the drug were reportedly experienced "usually" by one-third of the subjects (34% and 33%, respectively) and each of these

effects was experienced "occasionally" by 59% of the sample (Halikas, Goodwin and Guze, 1971).

In another more recent study by physicians, "increased sexual appetite" was reported by 60% of the chronic users and 43% of the occasional users of marihuana. Responses to a similar question regarding "decreased sexual appetite," revealed that 75% of the chronic users and 70% of the occasional users reported that this never occurred (Hochman and Brill, 1971).

The Mayor's Committee on Marihuana (1944) likewise attempted to assess the effects of marihuana on sexual interest and sexual stimulation. Its clinical studies of 72 male prisoners conducted at the Welfare Hospital in New York City revealed that "although there was an undeniable increase in overt sex interest following the ingestion of marihuana, . . . This sex interest seems to have been due primarily to the fact that these men have been imprisoned for various periods and had not had access to women" (p. 130). With respect to marihuana's effect on sexual stimulation the Committee indicated that although "some evidence of eroticism" was reported (in about 10% of the 150 instances in which marihuana was administered), there was no "frank expression of sexual stimulation" despite the presence of female nurses, attendants and others associated with the experiment (p. 38).

More recently, Professor Goode published the results of an informal survey of about 200 marihuana users in which he inquired about the relationship of marihuana to both sexual desire and sexual activity. To the question, "Do you think that being high on marihuana stimulates your sex interest, or not?", 38% said that their interest in sex while high was no different in degree from their normal interest in sex; 5% stated that being high on marihuana had a negative effect, i.e., that "it tended to turn them off sexually"; 13% replied that the effect depended on either their mood, their partner or both; and 44% (39% of the men and 50% of the women) reported that it "definitely increases their sexual desire" (1970: 162).

Perhaps the most conclusive and consistent finding to emerge from studies of the effects of marihuana on psychosexual stimulation is that the degree of sexual interest, desire and arousal induced by marihuana is dependent on the characteristics of the user and the extent to which he comes to expect or anticipate such an effect. Research shows that women are more likely to report heightened sexual desire than are men (Goode, 1969); that young people more frequently report arousal than do older persons (Bloomquist, 1968; Brenner,

Coles and Meagher, 1970);² that frequent users are more likely to report increased sex interest than infrequent users (Goode, 1970); that persons who are more sexually experienced are more likely to be sexually aroused by marihuana than are those less sexually experienced (Brenner, Coles and Meagher, 1970; Hochman and Brill, 1971; Goode in press) and that those who expect to be sexually aroused by the drug are more likely to be so aroused than those who do not (Goode, 1969; Fort, 1970; Grinspoon, 1971).

There is nothing inherent in the drug itself which produces heightened sexual interest, desire or arousal, nor is there any physiological evidence to show that marihuana directly or specifically acts on either the sexual centers of the brain or the sexual organs. As one observer has noted, marihuana "is not a sexual stimulant; that is, in the sense that it will not excite mindless, laboratory-located animal tissue" (Goode, 1969: 20). In short, marihuana is not an aphrodisiac.

HOW MARIHUANA INFLUENCES SEXUAL RESPONSE

It has already been stated that marihuana is not, in itself, an aphrodisiac although a substantial number of persons report increased sexual interest, desire and arousal following use of the drug. To what, then, are these effects attributable? Research bearing on this question suggests that to the extent that marihuana influences these responses, it does so indirectly by acting on the higher centers of the brain to relax inhibitions and reduce the usual restraints on behavior. By so doing, the user is placed in the position of being freer to respond to his sexual needs and desires (Walton, 1938; Allentuck and Bowman, 1942; Ausubel, 1958; Brown, 1961; McGothlin, 1966; Rosevear, 1967; Bloomquist, 1968; Oursler, 1968; Goode, 1969; Fort, 1970). The extent to which these responses occur, however, are dependent upon individual expectation and knowledge (Fort, 1970) and the social situation (set and setting) in which the marihuana use takes place (Goode, 1969). As Professor Goode has stated, "Man's somatic responses are often influenced more by what he thinks than by biological and chemical imperatives; in fact, it can happen that what he thinks actually becomes his biological and chemical imperative" (1969, p. 20).

In addition to its effects on sexual inhibition

² One observer points out, however, that most of the users of marihuana in this country are youths between the ages of 14 and 25 and that "this age span needs no aphrodisiac to stimulate either interest or capacity to perform" (Bloomquist, 1968: 183).

and restraints (the extent and consequences of which will be examined later), marihuana is also reported to intensify aesthetic experiences and to enhance sensual activity. As one observer has noted, it is perhaps the principal effect of marihuana to take one more intensely into whatever experience . . ." (Trocchi, 1967: 108).

It is this fact which probably explains why substantial proportions of marihuana users characterize their sexual experiences under the influence of the drug as particularly intense, prolonged, sensuous and pleasurable (Johnson, 1968; Goode, 1969; Brenner, Coles and Meagher, 1970; Hochman and Brill, 1971; Tart, 1971; Abelson, et al., 1972).

In one study of marihuana users conducted by a psychologist, 65% reported a heightened sense of touch, 55% stated that "touch takes on new qualities," and 56% replied that "sexual orgasm was very often or usually more exciting than when 'straight'" (Tart, 1971). Of the approximately 500 marihuana users surveyed by Goode, 68% (74% of the men and 62% of the women) reported that marihuana "generally acted as a pleasure-enhancer . . . (and) usually increased their sexual enjoyment" (Goode, in press, pp. 8-9).

In still another study of marihuana users, both occasional and chronic, "increased sexual pleasure" was the second most common response by the chronic users and the eighth most commonly reported effect by the occasional users; 83% of the former and 50% of the latter reported that increased sexual pleasure was often or always experienced after smoking marihuana.³ Interesting, too, was the finding that 85% of the chronic users and 78% of the occasional users reported *never* experiencing "decreased sexual pleasure" following use of the drug (Hochman and Brill, 1971: 7).

In the Commission's National Survey, respondents were asked to indicate whether or not they believed that marihuana increases sexual pleasure. Of those adults admitting they had tried marihuana at least once (15%), 52% thought that the drug does increase sexual pleasure. Both adults and youth in general, however, seem to be less certain of this effect. Only about one-fourth of all respondents (24% of adults and 26% of youth)

³ The students were also asked to assess the degree of importance attached to a number of possible motivations for using marihuana. As might be expected from the findings regarding marihuana and sexual enjoyment, significantly more of the users than the non-users attached at least some degree of importance to marihuana's perceived ability to enhance sexual experiences. To the item: "for better sexual experiences," 12% of the non-users, 40% of the occasional users and 70% of the chronic users felt that it was of some importance or "very" important in motivating use of the drug (Hochman and Brill, 1971).

indicated agreement with the statement while slightly under one-half of those surveyed (48% of the adults and 49% of the youth) expressed uncertainty about marihuana's ability to increase sexual pleasure (Ableson, et al., 1972: 25-33).

The research bearing on the effects of marihuana on sexual pleasure suggests that marihuana is not usually perceived by the general public to increase sexual enjoyment, that users are significantly more likely to believe that marihuana has this effect than are non-users, that those who expect to receive increased sexual pleasure are more likely to experience it than those who do not, and that frequent or regular users are significantly more likely to have actually experienced this effect than are those who use the drug less frequently.

THE EFFECTS OF MARIHUANA ON OVERT SEXUAL BEHAVIOR

As noted at the beginning of this discussion, society in general and policy makers in particular are primarily concerned about the extent to which and the conditions under which marihuana is likely to generate or increase the likelihood of sexually aberrant or aggressive behavior. Marihuana has already been shown to increase psychosexual stimulation in substantial proportions of users and to serve as a relaxer of inhibitions and restraints. The questions as yet unresolved, however, relate to (a) the importance of sexual arousal in generating sexual activity—particularly deviant sexual acts, and (b) the extent to which inhibitions and restraints, which normally serve to protect the individual and society from sexual excess and abuse, are lowered by marihuana to the point of being inoperative.

The available evidence suggests that (a) although marihuana users are more sexually active and sexually permissive than are non-users, marihuana does not generally stimulate sexual activity, appreciably alter established patterns of sexual behavior or serve as a catalyst to sexual promiscuity; (b) the marihuana user is rarely sexually aggressive; and (c) persons arrested for marihuana law violations generally do not have previous or subsequent criminal records for the commission of sexual offenses (Walton, 1938; Brown, 1961; White House Conference on Narcotic Drug Abuse, 1962; Blum et al., 1969; Brenner, Coles and Meagher, 1970; Goode, 1972; Goode, in press).

Before summarizing the research forming the basis of these assertions, however, it should be noted that there are several contradictory research findings with respect to (a) above. In one recent

study, for example, two Philadelphia physicians investigating the effects of marihuana on adolescents and young adults reported that the drug was directly responsible for sexual promiscuity in 13 of their female patients. In the words of these clinicians:

This group is singled out because of the unusual degree of sexual promiscuity, which ranged from sexual relations with several individuals of both sexes, and, sometimes, individuals of both sexes on the same evening. In histories of all of these individuals, we were struck by the loss of sexual inhibitions after short periods of marihuana smoking. Seven patients of this group became pregnant (one on several occasions), and four developed venereal diseases. . . . In no instance was there sexual promiscuity prior to the beginning of marihuana smoking. . . . We take these results to indicate marihuana's effects on loosening the superego controls and altering superego ideals (Kolansky and Moore, 1971: 491).

During 1970, another researcher (Goode, in press) distributed questionnaires on drug use to between 500 and 600 undergraduates in a large lecture course at a State University. Four measures of sexual activity were employed: (1) engagement in premarital intercourse, (2) the respondent's total number of different sexual partners, (3) the age of first intercourse and (4) the average frequency of intercourse during the six months prior to the study. The three indices of drug use employed were whether or not the respondent had ever smoked marihuana, the frequency of marihuana use during the six months prior to the survey, and the total number of drugs or drug types ever used by the respondent. The researcher found that "all measures of sexual activity correlated significantly and powerfully with all measures of drug use" (p. 12). More specifically, marihuana users were far more likely to have engaged in premarital intercourse (72%) than were non-users (34%); the greater the frequency of marihuana use and the greater the number of drugs ever tried, the earlier was the first intercourse, the greater was the frequency of intercourse and the greater was the number of sexual partners.

As the researcher suggests, one might be tempted to conclude from these findings that marihuana, as well as other drugs, causes early sex, frequent sex and sex with a number of different partners—were it not for the fact that similar findings point to a relationship in the opposite direction. That is, not only were marihuana users and drug experimenters more likely to experience sex early in their lives, but "it is also the sexually precocious who are more likely to use drugs, including marihuana" (p. 14). Of all respondents reporting intercourse by age 16, for example, 7% stated that they had never tried any illegal drug, but total absence

of illicit drug use was found in 47% of the virgins (p. 14).

Professor Goode concludes that "using marihuana or other illegal drugs no more 'causes' sexual behavior than sexual behavior 'causes' drug use" (p. 14). Rather, he suggests,

Both sexual permissiveness and marihuana use—as well as, to some extent, experimentation with certain other illegal drugs—are indicators of the young person's involvement in and with a subculture which is tolerant toward a wide range of non-traditional values and activities . . . Quite clearly, marihuana use grows out of a specific life style, which is, in turn, partly dependent on specific sociocultural background factors and permissive sexual behavior (branded as "promiscuous" by those who disapprove of it) is a part of this life style (pp. 14, 16).

Similar to Goode's findings are those obtained from a mail survey of 1400 undergraduate students at UCLA (Hochman and Brill, 1971). The data show that marihuana users have their first sexual experience earlier than do non-users (50% of the users and 30% of the non-users had their first experience before age 18); have more sexual experience than non-users; have a greater number of sexual partners than do non-users (twice as many users as non-users had five or more sexual partners); and have more liberal attitudes toward sex than do non-users.

One of the questions asked of the students was: "In your experience or opinion, do you think that marihuana usage over a long period results in sexual promiscuity?" Over half of the non-users (54%) and almost three-fourths (73%) of the users believed this happened rarely or not at all while 12% of the non-users, 3% of the occasional users and 2% of the chronic users believed that extended use of marihuana frequently leads to sexual promiscuity.

Although the users more often suffered from venereal disease than did the non-users (7% vs. 2%), there were no differences between the groups in the average frequency of sexual intercourse, the number of concurrent sexual partners, the number of pregnancies, miscarriages and illegitimacies, or the incidence of homosexuality.

A more middle-of-the-road position regarding the association between use of marihuana and sexual promiscuity was revealed in a Commission-sponsored mail survey of 781 judges, probation officers and court clinicians (InTech, 1971). In an effort to develop a profile of the regular marihuana user, respondents were asked: "In light of your professional experience, do you think all, most, some or just a few of the people who regularly use marihuana are sexually promiscuous?"

Tabulation of the responses revealed, among all three groups, considerable uncertainty and am-

bivalence as manifested in the findings that 23% of the total sample either did not answer the question or stated that they did not know, and that three-fifths of those who responded (701) would answer no more categorically than to say that only "some" could be characterized in this manner. The percentages of each of the three groups of respondents stating that all or most, some and few or none of the regular marihuana users are sexually promiscuous are shown in Table 4.

The Commission has found several studies dating from 1939 which support the assertions that the marihuana user is rarely sexually aggressive and that he rarely has a criminal record for the commission of sexual offenses.

A survey of the criminal records of 379 Greek offenders either sentenced or arrested for the public use of hashish between 1919 and 1950 (Gardikas, 1950) revealed no link between the use of hashish and the commission of sexual offenses.

Lambo (1965) compiled a list of crimes which occurred during a recent two-year period in three West African countries. Of the 472 "offences against women" committed during the period of study, 26% were claimed to have been committed by users of cannabis.

In a study conducted by the Kinsey Institute for Sex Research, 1500 incarcerated sex offenders were interviewed about their sexual offenses. The researchers found that in marked contrast to the role of alcohol in the commission of their offenses, particularly aggressive sex crimes, marihuana was a very insignificant factor. While the presence of alcohol was reported in relation to 67% of all sexually aggressive acts against children and 39% of such aggressive acts against adult women, marihuana was mentioned in only eight sexual offenses out of a total of 2,022 such offenses committed by the respondents (Gebhard, Gagnon, Pomeroy and Christenson, 1967: 761-819).

Two recent systematic studies of rape cases recorded by the police in Philadelphia (Amir, 1971) and Denver (MacDonald, 1971) gave no indication

Table 4.—JUDGES, PROBATION OFFICERS AND COURT CLINICIANS WHO BELIEVE THAT REGULAR MARIHUANA USERS ARE SEXUALLY PROMISCUOUS

(Figures in Percentages)			
	All or most	Some	Few or none
Judges (N=408).....	23.8	58.3	17.9
Probation Officers (N=87)....	21.9	58.6	19.5
Clinicians (N=106).....	11.3	65.1	23.6
Total (N=701).....	21.3	59.6	19.1

that marihuana was specifically linked to these offenses. It should be noted, however, that the involvement of marihuana in these cases, unlike the involvement of alcohol, was not specifically explored.

In two Commission-sponsored studies of the relationship between marihuana and crime, no evidence was found to suggest that marihuana is a significant factor in or contributor to the commission of sexual offenses. A study of 1,776 youthful offenders (16 to 21 years of age) arrested for marihuana law violations in five New York counties between 1965 and 1969 revealed that none of the offenders had either a previous or subsequent criminal record for the commission of sexual offenses (Weitzner, et. al., 1971).

In another study sponsored by the Commission, interviews with 559 male residents (16 to 34 years of age) of West Philadelphia, revealed that six respondents, or about one in 100, admitted to having committed the offense of "forcing sexual intercourse," three having reportedly committed it more than once but none having been apprehended for these offenses (Goode, 1972; 29a).

In an effort to assess the role of marihuana in these offenses, respondents were asked whether or not they had used the drug within the 24 hours preceding the commission of both their first and most recent offenses. In contrast to alcohol, which was reported to have been consumed within 24 hours prior to one-third of the first and most recent offenses of forcing sexual intercourse (two out of six and one out of three, respectively), none of the offenders reported smoking marihuana within 24 hours of either the first or most recent time they committed this offense (Goode, 1972: 29a).

Research findings which are available lend little support to the thesis that marihuana either causes or is a significant factor in the heightening of sexual aggression or the commission of sexual offenses.

Marihuana and (Non-Violent) Crime

Much that has been said with respect to aggressive behavior and violent crime also applies to the more general proposition that marihuana causes or leads to (non-violent) crime and delinquency. The popular and professional literature abounds with claims and counter-claims. Public and professional opinion surveys demonstrate a widespread belief in the existence of a marihuana-crime relationship but also reveal considerable uncertainty about the existence of such a relationship.

The empirical evidence is somewhat more consistent. Laboratory studies provide no evidence that marihuana produces effects which can be in-

terpreted as criminogenic. Although some studies of offender populations purport to demonstrate a causal relationship between marihuana and crime, they reveal, at the most, a significant statistical association. Closer examination of these data or more sophisticated analysis, however, generally shows the purported relationship to be spurious. The original relationship is usually found to derive not from the chemical effects of the drug but from the operation of social and cultural variables unrelated to either the drug or its use.

In the following pages the available evidence bearing on the relationship between marihuana and crime will be reviewed in an effort to determine whether marihuana itself or the use of the drug plays a significant precipitating or contributory role in the commission of criminal or delinquent acts.

PUBLIC AND PROFESSIONAL OPINION

The formulation and expression of strong opinions about the relationship of marihuana to criminal and delinquent behavior have persisted despite the inherent complexities of the issue, the relative absence of conclusive empirical evidence and the general lack of knowledge and understanding about the effects of the drug. For the most part, however, neither public nor professional opinion about marihuana and its impact on public safety has been explored in any systematic fashion. As a consequence, public policy with respect to the drug has been shaped by the most vociferous advocates of one position or another at any given time.

Probably the first official body to explore prevailing opinion about the relationship between marihuana use and crime was the Indian Hemp Drugs Commission of 1893-1894. The Commission spent over a year in making field trips to 30 cities, in receiving evidence from almost 1,200 expert witnesses (335 of whom were medical practitioners) and in reviewing judicial proceedings and the case files from India's mental hospitals. The Commission's Report, reprinted in 1969, contains the following information gathered with respect to the relationship of marihuana use to crime.

First, the Commission found that the majority of hemp drug consumers were moderate rather than excessive users, and that the drug users were rarely regarded as offensive or potentially dangerous by their neighbors (a few objected to the smell of the smoke or the example set by the users for the neighborhood children).

With respect to the drug's possible long-term or chronic criminogenic effects (producing "bad

characters”), the Commission reported that two-thirds of the witnesses did not believe that marihuana would produce, over time, a large proportion of “bad characters” among the moderate users. A majority felt that even excessive use was unrelated to the production of “bad characters.” When the possible relationship was framed more precisely in terms of cause-effect rather than statistical association, a ratio of 8 to 1 of the witnesses held that moderate consumption of these drugs had no connection with crime and a ratio of 4 to 1 denied a causal connection between excessive consumption and being a “bad character.”

With respect to the more acute effects of hemp drugs, the Commission set out to determine whether criminals use the drug to fortify their courage prior to the commission of their crimes, whether the drugs were used by criminals “to stupefy their victims,” and whether the drugs incited the user to commit unpremeditated crimes. The Commission’s conclusion regarding the first question was that “criminals like any other consumers of these drugs go to them for that assistance when they feel they require it” (p. 256).

To the second question, the Commission responded that although some persons had alleged the commission of “thefts of ornaments from children stupefied by sweet meats” containing marihuana, the fact of other readily available, more effective and more disabling drugs, considerably more conducive to surreptitious administration, cast doubt on the use of hemp drugs by criminals for this purpose.

To the third question, the Commission said that the majority of witnesses saw no connection between either the moderate or excessive use of hemp drugs and the commission of unpremeditated crimes, including crimes of violence. The Commission therefore concluded that “for all practical purposes it may be laid down that there is little or no connection between the use of hemp drugs and crime” (p. 264).

The Mayor’s Committee on Marihuana (1944) also interviewed law enforcement officers (federal, state and local police) about the purported link between marihuana and crime. The Committee reported that:

In most instances [the police officers] unhesitatingly stated that there is no proof that major crimes are associated with the practice of smoking marihuana. They did state that many marihuana smokers are guilty of petty crimes, but that the criminal career usually existed prior to the time the individual smoked his first marihuana cigarette (Schoenfeld, 1944: 14–15).

Reference has already been made to the results of a small, unpublished survey of the opinions of police officers about the relationship of marihuana

to aggression (Schofield, 1968). All of the respondents reported observing a variety of conduct exhibited by users under the influence of marihuana and emphasized that an individual’s reaction to the drug depends on his particular personality and, in some instances, the strength of the dose. Some respondents observed a recent shift in the type of individual or personality prone to using marihuana.

In response to a question regarding the use of marihuana prior to engaging in property crimes, 10 out of the 16 officers interviewed believed that this often occurred. Seven cited specific examples of offenders who reported using marihuana before committing their offenses to bolster their courage and sharpen their senses; the views of three rested on hearsay evidence; and the remaining six officers responded that they did not believe this was a common practice and that they had never personally observed such examples.

In the Commission-sponsored National Survey of a representative sample of more than 3,000 American youth and adults (Abelson, et al., 1972), respondents were asked to indicate their agreement or disagreement with the statement that “many crimes are committed by persons who show that 56% of the adults and 41% of the youth agree with the statement. The extent of agreement, however, varies significantly according to age, education, geographic location and the marihuana-using experience of the respondent. Those who are early adolescents (12–13 years), over 25 years of age, have not completed high school, live in the South or North Central regions of the country and have no experience with marihuana are significantly more likely to agree with the statement than are those who are between 14 and 25 years of age, are at least high school graduates, live in the Northeast or West and have had experience with marihuana. Table 5 below, shows the percentage of respondents agreeing to the statement according to age, education, geographic location and experience with marihuana.

The survey also showed the existence of considerable uncertainty with respect to the proposition that many crimes are committed by persons under the influence of marihuana; 25% of the youth and 17% of the adults were either unsure of its relative truth or failed to respond to the question (p. 69). Adults were considerably more certain, however, about the relationship between alcohol and crime (youth were not asked the question); 7% were either unsure or did not respond and 69% agreed with the statement that many crimes are committed by persons who were under the influence of liquor (pp. 28, 31).

Table 5.—PERCENTAGE OF RESPONDENTS WHO AGREE THAT "MANY CRIMES ARE COMMITTED BY PERSONS WHO ARE UNDER THE INFLUENCE OF MARIHUANA"

	Percent agreeing	
	Youth	Adults
Total respondents agreeing.....	40.7	56.0
Age (years):		
12-13.....	54.5	.....
14-15.....	35.2	.....
16-17.....	31.8	.....
18-25.....	.....	35.1
26-34.....	.....	48.5
35-49.....	.....	59.0
50 and over.....	.....	68.8
Education:		
Less than high school graduate.....	.....	70.9
Eighth grade or less.....	49.5	.....
Ninth-twelfth grades.....	31.8	.....
High school graduate.....	.....	56.8
College or more.....	.....	39.2
Geographic location:		
Northeast.....	34.1	46.9
North-Central.....	42.1	54.9
South.....	48.5	66.8
West.....	34.0	52.3
Marihuana experience (ever used):		
Yes.....	8.9	24.1
No.....	46.1	62.0

The surveys of prosecuting attorneys, judges, probation officers and court clinicians also revealed considerable doubt about the existence of a causal connection between marihuana and crime. Although the survey of prosecuting attorneys conducted by the Commission staff asked only about aggressive behavior and violent crime, the data showed that 52% of the respondents either denied or were uncertain that marihuana causes such behavior.

The Commission-sponsored survey of nationally representative samples of judges, probation officers and court clinicians, however, posed several questions bearing on the more general proposition that marihuana is related to crime and delinquency (InTech, 1971). Respondents were first asked whether or not they had witnessed an increase in the incidence of drug or drug-related offenses in their caseloads during the past five years. The large majority of all three groups (86%) responded affirmatively and reported that marihuana was the type of drug most often seen in this connection (83%). However, about two-thirds of the respondents reported that marihuana offenders (those arrested for using or selling marihuana) constituted less than 20% of their caseloads; 56% of the respondents reported that those arrested for non-drug offenses but incidentally

found to possess marihuana comprised less than 10% of their caseloads; and 73% of the respondents reported that less than 10% of their caseloads attributed their offenses to marihuana (pp. 31, 34).

To determine better the nature and direction of a possible relationship between marihuana use and crime, respondents were asked to indicate which of four statements most reflected their own professional experience. On the whole, the respondents were more likely to postulate a statistical association (36.6%) rather than a direct cause-effect relationship (26.9%); 18% of the respondents thought that involvement in a criminal or delinquent subculture caused or led to the use of marihuana (in contrast to the more prevalent belief that marihuana use leads to crime) and 9.1% believed there was absolutely no relationship between marihuana use and other criminal or delinquent behavior. The extent to which uncertainty prevails even among these practicing professionals is reflected in the 9.3% no response category (p. 39).

Table 6 shows the responses of the judges, probation officers and clinicians to each of the four propositions (InTech, 1971: Appendix I, Section II, Question 3). The data show that judges are significantly more likely to believe that marihuana causes or leads to criminal and delinquent behavior and significantly less likely to believe in either a statistical relationship or in no relationship whatsoever than either the probation officers or the clinicians.

The researchers also attempted to determine these professionals' opinions about crimes actually committed by marihuana users. More specifically, did the respondents think that most non-drug crimes committed by persons who were known users of marihuana occurred when the individuals were actually under the influence of the drug or when they attempted to obtain it? Again, the responses indicated considerable uncertainty in all three groups. One-third of the respondents were either unsure or did not respond to either proposition. About twice the number of respondents thought that the crimes occurred while in the attempt to obtain marihuana (31.0%) rather than while under the influence of marihuana (16.8%).

Table 7 shows the percentage of respondents indicating the probable truth and probable non-truth of the two propositions (Appendix I, Section II, Questions 2a, 2b).

The data show that half of the respondents denied the commission of non-drug crimes while under the influence of the drug, suggesting that marihuana itself does not have the capacity to

Table 6.—THE OPINIONS OF JUDGES, PROBATION OFFICERS AND COURT CLINICIANS REGARDING THE NATURE OF THE RELATIONSHIP BETWEEN MARIHUANA USE AND OTHER CRIMINAL OR DELINQUENT BEHAVIOR

(Figures in Percentages)

	Judges (N=556)	Probation officers (N=110)	Court clinicians (N=115)	Total (N=781)
Use of marihuana causes or leads to antisocial behavior in the sense that it leads one to commit other criminal or delinquent acts.....	33.8	18.2	1.7	26.9
Involvement in a criminal or delinquent subculture causes or leads to the use of marihuana.....	18.3	20.0	14.8	18.1
There is a statistical relationship or association between marihuana use and other criminal or delinquent behavior, but it is not a cause-effect relationship.....	31.1	40.0	60.0	36.6
There is absolutely no relationship between marihuana use and other criminal or delinquent behavior.....	6.7	14.5	15.7	9.1

($\chi^2=76.895$, $p<.001$).

produce criminogenic effects. About one-third of the respondents, however, believed that these crimes occur when the user is attempting to obtain the drug, suggesting an addiction model; that is, that users commit crimes to support a "habit."

This interpretation is corroborated by the significant findings that 65% of the respondents either did not know (23%) or thought that a few (21%), some (17%) or most (4.4%) of the regular users were *physically addicted* to marihuana.

The National Survey of the general public (Abelson, et al., 1972) likewise showed that large segments of the population (65% of all adults and 48% of all youth) regard marihuana as addictive. Even among the users, 40% of adults and 21%

of the youth believed marihuana to be addicting (p. 22).

These findings, taken together, suggest that much of the confusion regarding the relationship between marihuana and crime may be predicated on public and professional misconceptions about the drug's addiction potential. The Commission's National Survey showed that, among those persons who believed marihuana to be addicting, 67.5% of the adults and 52.3% of the youth believed that many crimes are committed by persons under the influence of marihuana. Among those who said that marihuana was not addicting, 34.6% of the adults and 30.2% of the youth agreed that many crimes are committed by marihuana users. Table 8 below shows this relationship (unpublished data, Abelson, et al., 1972).

Table 7.—RESPONSES OF JUDGES, PROBATION OFFICERS AND COURT CLINICIANS TO STATEMENTS ABOUT NON-DRUG CRIMES COMMITTED BY MARIHUANA USERS

(Figures in Percentages)

	Most non-drug crimes committed by persons who use marihuana occur when the offender is—			
	Under the influence of marihuana		Attempting to obtain marihuana	
	Probably true	Probably not true	Probably true	Probably not true
Judges.....	17.1 %	46.8 %	34.2 %	30.4 %
Probation officers....	21.8	47.3	30.0	37.3
Court clinicians.....	10.4	65.2	16.5	60.0
Total.....	16.8	49.6	31.0	35.7

Table 8.—RELATIONSHIP BETWEEN PERSONS WHO THINK MARIHUANA IS ADDICTIVE AND THOSE WHO THINK THAT MANY CRIMES ARE COMMITTED BY PERSONS UNDER THE INFLUENCE OF MARIHUANA

(Figures in Percentages)

	Persons who think marihuana is—			
	Addictive		Not addictive	
	Youth	Adults	Youth	Adults
Many crimes are committed under the influence of marihuana:				
Mostly agree.....	52.3	67.5	30.2	34.6
Mostly disagree.....	20.8	14.5	39.9	41.1
Other.....	2.3	3.1	4.4	2.0
Not sure/no answer.....	24.6	14.9	25.6	27.3

To summarize, these opinion surveys demonstrate that there is considerable uncertainty about the existence and the nature of a relationship between marihuana use and crime and that this uncertainty exists among youth and adults, practicing professionals in the criminal justice community and the lay public, marihuana users and non-users alike. The data suggest, however, that the persistent and fairly widespread belief in a cause-effect relationship between marihuana and crime may, at least in part, be predicated on the erroneous but equally prevalent belief that marihuana is physically addicting. To the extent that the general public operates under this misconception, they may be more likely to believe that, like the heroin user, the marihuana "addict" commits crime in order to support his "habit" and obtain the drug.

The logical extension of this belief is that marihuana users, like heroin users, will be considered more likely to commit their crimes in the attempt to obtain the drug than while under the influence of the drug. Stated another way, persons who believe that marihuana is physically addicting would be more likely to base the purported causal relationship between marihuana and crime not on the chemical effects of the drug *per se* but on the user's physical need for the drug. As such, they would be more likely to postulate that most crimes committed by users occur not when the offender is under the influence of the drug (which, like heroin, makes one passive, lethargic and stuporous) but when the "addict" needs a "fix" and is desperately trying to obtain the drug or the money to buy it. This interpretation is, indeed, supported by the findings of the Commission-sponsored survey of judges, probation officers and court clinicians and is suggested from the findings of the National Survey.

STUDIES OF OFFENDER POPULATIONS

Over the years, numerous studies have relied on offender populations and zero-order statistical correlations to "demonstrate" a cause-effect relationship between marihuana and crime. This method of "proof by enumeration" has become probably the most common approach to "demonstrating" the purported causal relationship.

As Goode (1970) has noted, however:

Not even marihuana's staunchest supporter would argue that a crime has never been committed by a user while high. Yet, incredible as it seems, the burden of many proofs of marihuana's criminal effects has been precisely the simple fact that it is *possible to locate* crimes committed in conjunction with smoking marihuana. "Proof" by enumeration is no proof at all. By examining an enumeration of crimes which were committed under the

influence of marihuana (even were this definitely known), it is impossible to determine the "cause" of the event taking place, in this case the crime—or, indeed, that marihuana has anything whatsoever to do with its commission (pp. 215-216).

Even if these studies are taken at face value, their findings do not generally support the thesis of a positive and significant statistical association. In most instances, marihuana has not been found to predispose one to commit crime or to serve as an initiator of criminal careers; nor does the use of the drug appear to alter the progression to other non-drug offenses among those without prior criminal records or histories of psychological maladjustment. Predictably, however, the data do indicate a greater rate of progression among marihuana-using offenders (both those arrested specifically for their marihuana offenses and those charged with non-drug crimes) than that which might be expected from similar, non-using offenders or from the general population.

Because these studies do provide at least interesting insights into the possible nature and direction of a relationship between marihuana and crime or, conversely, a non-existent relationship, several of these studies are summarized below.

Bromberg, 1939. Between 1932 and 1937, Bromberg and his team of researchers reviewed all cases eventuating in conviction by New York's Courts of General and Special Sessions; conducted interviews with about 17,000 drug- and non-drug-using offenders; and analyzed the statistics from both courts. The report of this work, published in 1939, yielded the following information.

Among the 16,854 offenders convicted of felonies in the court of General Sessions, 67 (.005%) were identified as marihuana users. Of these 67, 46 (69%) had been convicted on charges of possession with intent to sell; 16 (24%) were charged with burglary, robbery and grand larceny; two persons were charged with assault and one each was charged with petty larceny, forgery and murder.

The researcher points out that in only nine cases did the offenders' criminal records commence with a drug charge, "indicating that there was not in those cases a close relationship between drugs and the beginning of a career in crime" (p. 10).

In a 25% random sample of offenders convicted in the Court of Special Sessions (misdemeanors), 135 or 9% were charged with possession of marihuana. Of these 135, 93 or 69% had no previous record, 8 had been charged previously with drug violations only, 5 had mixed drug and non-drug charges and 29 (21%) had only non-drug arrests. In summary, the researcher stated that:

As measured by the succession of arrests and convictions in the Court of General Sessions (felonies) . . .

it can be said that drugs generally do not initiate criminal careers. Similarly, in the Court of Special Sessions (misdemeanors), only 8% of the offenders had previous charges of using drugs and 3.7% had previous charges of drugs and other petty crimes. In the vast majority of cases . . . then, the earlier use of marihuana apparently did not predispose to crime, even that of using other drugs. . . . The expectancy of major crimes following the use of cannabis in New York County is small, according to these experiences (p. 10).

Bromberg and Rodgers, 1946. A study of 8,280 naval and marine prisoners at the U.S. Naval Prison in Portsmouth, New Hampshire (1946) revealed that 40 or .0048% of the offenders were marihuana users. The offenses they committed while in the service were: AWOL or AOL (32 or 80%), assault or striking an officer (3), theft (3), and narcotics violations (2). Their previous civilian offenses included three each of assault, theft and traffic violations and one each of gambling and narcotics violations, drunkenness, draft dodging, and violation of the Mann Act. Twenty-eight or 70% of the marihuana users had no previous civilian criminal records (p. 825).

The preponderance of psychiatric disorders in the user group over the non-users (40 randomly selected non-using naval prisoners) led the researchers to conclude that "marihuana usage is but an aspect of some type of mental disorder or personality abnormality" (p. 826), a conclusion also reached by Charen and Perelman (1946), Ausubel (1958), Andrade (1964), Lambo (1965), Bloomquist (1968), Simmons (1969) and Grinspoon (1971).

Gardikas, 1950. The researcher reviewed the criminal records of "379 individuals either sentenced or arrested *flagrante delicto* for using hashish publically" between 1919 and 1950. More than half (55%) of these individuals were already known to law enforcement authorities prior to their use of hashish and an additional 14% had no subsequent difficulties with the law except for hashish and vagrancy offenses. The researcher notes, however, that the remaining 117 offenders (31% of the original sample) went on to become "confirmed criminals after their first hashish arrest."

Dividing this last subgroup of 117 into three approximately equal parts, Gardikas then described the subsequent criminality of each group. The first group was given 332 more sentences following their first sentence for using hashish; 142 (43%) were additional hashish offenses, a similar number were for violent crimes or crimes involving weapons, 18 were for "insults" and two were for "high treason."

In a critique of the Gardikas study, Kaplan were accumulated; mostly for hashish offenses

(42%) and thefts (20%). Although there were a small number of violent crimes subsequently committed by this group of offenders, most sentences subsequent to their initial hashish sentence were for such relatively minor offenses as illegal gambling, living on immoral earnings, "false statements of identity," and "fishing with dynamite."

The third group discussed by Gardikas, comprised of those "who after having made use of hashish became criminals," accumulated 332 additional sentences. Hashish offenses were again responsible for 30% of these offenses and most of the rest were for theft. Gardikas notes with respect to this group that although not all of these individuals were criminal before they used hashish, their use of hashish "turned [them] into habitual hashish smokers and habitual criminals with a strong propensity leading toward crime of dishonesty and particularly theft and fraud. At least one-half of them surely and undoubtedly are even to be characterized as dangerous idle vagrants" (p. 203).

In a critique of the Gardikas study, Kaplan (1971) has stated that:

The basic problem underlying Gardikas' paper is his conclusion that hashish use caused his subsample of 117 arrests to become criminals. This assumes, first, that they had not engaged in crime before beginning to use hashish and, second, that it was the hashish use and not something else that turned them toward crime. Neither of these assumptions is justified by the data. . . . As for the first assumption . . . all we know is that they had not been arrested or convicted for other crimes first. . . . The second assumption . . . is also impossible to justify. Even if the members of the subsample had not previously been criminals, it may very well be difficult to distinguish the criminogenic effects of hashish from those of conviction and sentence to Greek jails.

Even aside from any criminogenic effect of the Greek penal system, the figures may indicate only that once somebody has been arrested for hashish—and probably served a term in jail as well—he is more likely to be picked up by the police when further crimes are committed. Finally, the years from 1919 through 1950 . . . were a period of enormous social dislocation [in Greece] It is obviously an almost impossible task to sort out how much of the subsequent criminality in the subsample was due to hashish use and how much to the social chaos that prevailed in Greece (pp. 103-104).

Andrade, 1964. The researcher retrospectively reviewed the examinations of 120 patients sentenced between 1951 and 1960 by a Brazilian Court to Heitor Carrilho insane asylum. Sentencing in all cases was based on the allegation that cannabis was directly responsible for their crimes. The researcher concluded that:

In the 120 patients examined, we did not find any criminogenic action that could be attributed to cannabis; . . . In the majority of cases examined (83), we found patients with psychotic disturbances. . . . In the cases in which we did not find mental disturbances, a total of 37,

the crime attributed to them was that of carrying or selling marihuana. . . . In the study of the dynamics of the crimes of all the others, we saw that there was a link between the crime and the illness, independent of the use of cannabis (Tinklenberg, 1971 : 12).

Lambo, 1965. The researcher compiled lists of crimes occurring over a two year period in three West African nations and recorded the number of offenders perpetrating these crimes. He found that approximately one-fourth of the offenders had previous convictions. Forty-seven percent of the 863 offenders convicted for false pretenses, 61% of the 2,880 convicted burglars and 54% of those convicted on charges of "culpable driving" were said to have histories of cannabis use. Many of these users, however, were also shown to have long histories of psychological maladjustment (p. 10). The researcher suggests that "the use of cannabis enhances suggestibility in certain individuals, and this may be a factor in the commission of crime by these chronic abusers" (p. 11).

THE RELATIONSHIP BETWEEN MARIHUANA AND CRIME: AN EXPLANATION

As indicated at the outset, enumerative studies of the crimes committed by apprehended marihuana law violators and non-drug offenders identified as marihuana users cannot, by their very nature, either prove or disprove a causal connection between the use of cannabis and the commission of crimes; nor can their rates of crime be projected onto the larger universe of marihuana users.

As several researchers have pointed out, those individuals apprehended for marihuana offenses represent only a tiny fraction of all marihuana users (Kaplan, 1971; Weitzner, et al., 1971); likewise, those in other offender samples who are identified as marihuana users represent only a small proportion of the offender populations of which they are a part (Bromberg, 1939; Bromberg and Rodgers, 1946; Kaplan, 1971).

Although the data do indicate that some individuals identified as marihuana users are subsequently involved in crime, both drug-specific and non-drug offenses, they do not provide support for the thesis that cannabis was the determining factor in their criminal careers. Likewise, they fail to indicate that the rate of progression to other crimes manifested by these offenders was significantly greater than that which might be expected in either a non-using criminal subgroup or the general population.

As Tinklenberg (1971) has stated :

The important issue is that unless one has systematic data on the proclivities toward crime of the various sub-

groups of marihuana users, one cannot answer the crucial question of whether the use of marihuana alters the actual rate of crime among these various subgroups over the criminality which would be expected. At this time, it is unknown whether individuals with these characteristics seek the use of marihuana or whether the use of marihuana in any way contributes to the development of these traits (p. 24).

By reading between the lines of these enumerative studies, however, one would be tempted to postulate that individuals with certain psychological, social and cultural characteristics are more likely to seek the use of marihuana than is marihuana likely to contribute to the development of delinquent or criminal behavior patterns.

The number of researchers pointing to individuals with long histories of psychological maladjustment or disturbances has already been noted. Others have alluded to persons involved, prior to cannabis use, in criminal or delinquent subcultures (Blumer, 1967; Robins, et al., 1970; Kaplan, 1971; Weitzner, et al., 1971). Still others suggest that marihuana use is more likely to develop among persons living in underprivileged communities or within a social structure that limits achievement and advancement (Asuni, 1964; Blumer, 1967; Goode, 1972).

In recent years, considerable evidence has been gathered to suggest that the use of other drugs and association with drug-using friends are also likely to enhance the probability of marihuana use (Hochman and Brill, 1971; Goode, 1972; Abelson, et al., 1972).

Because many of these characteristics are likely to be associated with both criminal or delinquent behavior and marihuana use, some individuals have mistakenly concluded a cause-effect relationship rather than a statistical correlation.

The studies reviewed in the following pages are probably the most methodologically adequate assessments of the purported relationship between marihuana and crime undertaken to date. The data show that the seemingly significant statistical correlation often observed between marihuana use and crime is spurious; it is dependent not on the chemical effects of the drug but upon the operation of several extra-pharmacological variables which have little or nothing to do with the use of marihuana *per se*.

The first of these studies (Goode, 1970) is based on a sample of marihuana users. Because it, like the study by Robins and his colleagues (1967, 1970) referred to earlier, involves a selected population, the extent to which its findings can be applied to the general population remains speculative.

The second study presented, a Commission-sponsored survey of young male urban dwellers, is probably the most adequate assessment to date of the relationship between marihuana use and crime. The results are based on a representative sample of the general population of males, 15 to 34 years of age; the self reports of criminal behavior have been cross-checked with Philadelphia Police Department files; and numerous statistical controls have been applied to the data. The study therefore provides at least tentative answers to the following questions:

- Do young, male marihuana users and non-users in the general population differ significantly in the nature and extent of their criminal activities?
- Is marihuana use, in and of itself, the principal determinant of any observed differences?
- If not, what are the variables which explain a statistical correlation between marihuana use and crime?

Goode, 1970. Between February and September of 1967, face-to-face interviews were held with 204 marihuana users residing in the New York City Metropolitan Area. The sample, admittedly non-representative, was drawn from membership lists of drug-related organizations and also included friends and acquaintances of the researcher.

The sample, suspected of differing to some unknown extent from a random sample of marihuana users, can be characterized as primarily male (53%), young (median age 22 years), white (89.5%), single (78%), middle class urban dwellers, including students, dropouts, business people, housewives and the unemployed (p. 316).

All of the respondents, by virtue of their marihuana use, possession or sale, had engaged in law violative behavior, but only nine marihuana arrests were reported. This finding indicates that persons who are arrested for marihuana related activities constitute only a small fraction of total marihuana users.

Because of their marihuana-related criminal activity, one would expect that persons in this sample would have a higher probability of being arrested than would the "average" person from the general population. To determine if, in fact, this might be the case, the researcher computed the rate of arrest for his sample and compared it with the national rate of arrest provided by the Federal Bureau of Investigation for the year 1965. Despite the fact that the rates are not strictly comparable (the sample rate is based on arrests ever experienced; the national rate is based on the number of arrests recorded for one year), the simi-

larity is striking. The national rate was given as 3.7 per 100; the sample rate was computed to be 3.9 per 100 per year, 4.5 if one adds the marihuana arrests (p. 236).

Although the arrest rates of the users and the general population were found to be roughly similar, the types of crimes committed by the users differed significantly from those crimes recorded for the population as a whole. In contrast to the majority of drunkenness and disorderly conduct charges noted for the general population, the offenses of the users most often resulting in arrest involved participation in political demonstrations (19 out of the 55 arrests). No other single offense attracted more than a few arrests (p. 235).

In addition to examining arrest rates and the types of offenses committed, the researcher also investigated the relationship between the amount of marihuana smoked and the criminal behavior of the user. If it were true that marihuana did produce a dangerous and criminogenic state in the user, the greater would be his likelihood of committing crimes and of being arrested.

The data, however, show no relationship; excluding the "political crimes" (which were most common among the least frequent smokers and least common among the most frequent smokers), the "serious" crimes committed by 15 respondents (non-marihuana narcotics possession, disorderly conduct, drunkenness, burglary, theft, assault, auto theft, serving liquor to a minor and larceny) resulted in a total of 21 arrests. The heavy smokers did not commit these crimes significantly more frequently than did the light smokers.

Similarly, there was no relationship found between the frequency of use and the likelihood of arrest; three of the daily smokers, three of those who smoked three to six times per week, three who smoked one or two times weekly, one who smoked four times monthly and three who were less than monthly smokers were arrested for committing these "serious" crimes (pp. 237-38).

The researcher concludes that:

Although these numbers are extremely small, the fact of their perfect dispersal is perhaps indicative of the lack of a crime-inducing effect of the drug. It is, at any rate, a proposition which ought to be tested more systematically in the future with more complete data. For the moment, there are indications that point to the fact that the marijuana smoker is no more criminal than the rest of the population (p. 238).

Goode, 1972. The Commission-sponsored Philadelphia survey set out to resolve these issues. Goode (1972) analyzed the data collected during August of 1971 from an interview survey of 559 15-to-34-year-old male residents of West Phila-

delphia.⁴ That part of the report devoted specifically to the analysis of the data is presented in its entirety below. The only deletions made were the author's references to previous studies bearing on the issues addressed, the findings of which have been presented earlier in this chapter.

Excerpts From

MARIJUANA USE AND CRIME*

PREFACE

The data analyzed in this report were gathered in August 1971 by the Institute for Survey Research of Temple University in Philadelphia; the author of this report did not have a hand in any phase of the data gathering, including constructing the interview schedule, although he is solely responsible for the data analysis. The sample consists in toto of males age 15 through 34 living in households located in a section of West Philadelphia. Each respondent was interviewed; a total sample size of 559 was collected. (The refusal rate was 10%, which is typical for house-to-house surveys of this type.) The area in which the sample was drawn is composed mainly of two heterogeneous populations: lower-middle and working-class, high school educated blacks, and college-associated whites—students and professionals associated with [Drexel University and] the University of Pennsylvania. About four respondents in ten in this survey are black, and just over half are white. (The number of Orientals and Puerto Ricans or Mexicans is too small to permit a meaningful statistical analysis, so that when race is discussed in this report, only the black-white comparison will be made.) The racial composition is roughly equivalent to the census figures for the sample area—although no attempt was made, through a weighting of cases, to “correct” any discrepancies which might have prevailed in population composition. More detailed information is available from the Institute for Survey Research.

A quarter of the sample (25%) had never smoked marijuana; in 17 cases (3%), no information on marijuana use was given by the respondent. Of the marijuana users—the question asked about frequency of use during the respondent's *most recent year of use*—about 1 in 10 smoked marijuana daily or more, about 1 in 5 smoked approximately once or twice a week, 1 in 4 smoked once or twice per month, on the average, and about 4 in 10 smoked marijuana several times a year. (The study also asked how often the respondent smoked marijuana in his *first year of use*—a variable which I have not made use of in this report.) Questions were also asked concerning the respondent's use of other drugs—“stimulants or uppers, such as bennies, speed, or dex,” “sedatives or downers,

such as sleeping pills, amytal or blues, or nembutal, or yellow jackets,” “hallucinatory drugs, such as LSD, mescaline, or STP,” and “hard drugs, such as heroin, morphine, demerol, cocaine, or codeine.” In addition, questions on one's friends' drug use—both marijuana and these other drugs—were asked.

The commission of various offenses formed another segment of the questionnaire. There were 16 of them, and ranged from those which would not be considered crimes in most instances—such as “disturbing people”—to those which would be considered felonies, drawing long prison sentences—such as rape, armed robbery, and assault. As would be expected, the serious offenses were committed (or admitted to) by very, very few respondents—and thus, any comparison between users and non-users has to be made mainly on the basis of committing trivial offenses. . . .

III. THE EFFECTS OF MARIJUANA

At this point, I will introduce the data from the Philadelphia marijuana use and crime study, specifically mandated by the National Commission on Marihuana and Drug Abuse. This survey's data will form the bulk of the factual evidence on the marijuana-crime connection in the report which follows.

The question of marijuana's relationship to crime and aggressive behavior is obviously closely related to the drug's effects. One of the most fundamental generalizations in psychopharmacology to be obtained from thousands of recent research efforts is that the same drug does not have standard and invariant “effects,” but that effects are sensitive to a number of extra-pharmacological variables, including the personality of the user, the social setting in which drug use takes place, the user's past experience with the drug, his expectations, and so on. Thus, it is elliptical and somewhat artificial, and incomplete, to speak of any drug's “effects,” as if they occurred under any and all conditions, in all users. We should bear this qualification in mind when looking at the relationship between the ingestion of a drug and any subsequent behavior—with the latter supposedly “caused” by the effects of the drug. Drug effects vary, and, in addition, even standard effects do not automatically translate into specific forms of human behavior. Even opposite forms of behavior could follow the same effects, given different individuals taking the drug, different settings in which the drug is used, different definitions of the drug and its use and so on. . . .

The data collected by the Philadelphia survey on the subjective effects of marijuana dove-tail precisely with [those reported in earlier studies]. The effects agreed to by the users in the sample are clearly inconsistent with aggressive behavior. This does *not* mean that marijuana *cannot* be related to the commission of criminal or aggressive acts—but it does suggest that the effects of marijuana, per se, *may* have nothing to do with the commission of crimes, especially violent crimes. Table 1 summarizes the results from this survey's question on marijuana's effects, which was: “I am going to read to you some of the ways using marijuana may affect people. For each could you tell me whether marijuana had this effect on you almost every time, more than half the time, less than half the time, or never or almost never, when using marijuana.” The effects asked about were related to feelings generally thought of as criminogenic—either in a positive or a negative direction. Those that are generally considered to be related to crimes deal with anger and

⁴The interview schedule was developed and executed and the data processed for the Commission by Temple University's Institute for Survey Research, in Philadelphia.

*Prepared by Professor Erich Goode for the National Commission on Marihuana and Drug Abuse, January 15, 1972. The data on which this report is based were obtained from a survey conducted by the Institute of Survey Research of Temple University. All tables referred to in Professor Goode's text are found at the end of these excerpts.

frustration, or with derangement, or with suggestibility. Those inversely related to the commission of crimes and aggressive acts dealt with relaxation and sleepiness.

As can be readily seen from Table 1, users overwhelmingly deny that marijuana has effects on them which could be interpreted as criminogenic or violent in nature. Nearly all respondents specifically denied that aggressive feelings came over them during the marijuana intoxication. When asked whether, under the influence of marijuana, they had a feeling of wanting to hurt someone, 96% said that this occurred *never or almost never*. When asked whether they had feelings of wanting to do something violent, 95% said *never or almost never*. Almost nine in 10 (88%) said that they *never or almost never* felt more angry when high. And almost eight in 10 (78%) said that they *never or almost never* felt frustrated when under the influence. Thus, the frustration-anger-aggressive impulse syndrome seems to be an extremely rare phenomenon associated with the marijuana intoxication. Likewise, the suggestibility syndrome does not appear to be characteristic, although it seems to be somewhat more common than aggressive feelings. About six in 10 (or 59%) of the respondents said that they had a feeling of "being more willing to follow other people's suggestions," *never or almost never*. And about three-quarters (77%) said that they had a "feeling of being able to do anything," *never or almost never*. Those sensations, however, which would be seen as *inhibiting* criminal and aggressive impulses and acts were decidedly more common. Exactly half of the respondents said that they felt "a feeling of relaxation" *almost all the time*. About a third (31%) said that they felt *less* angry than usual *almost all the time*. About a fifth (22%) felt drowsy and sleepy *almost all the time*—and another quarter (25%) felt this more than half the time.

These data suggest—but do not demonstrate—that the effects of marijuana *per se* are probably not related in any meaningful or causal manner to aggressive or criminal acts. They give us a clue, but do not prove, that in and of itself, marijuana use does not "cause" the commission of criminal acts. In fact, if we were to look at the subjective effects of marijuana themselves, they appear to point in exactly the opposite direction—they would seem to inhibit crime, indeed, activity of all kinds. The effect of marijuana would be more in the direction of reducing than stimulating aggressive, criminal or violent activity.

Two final qualifications would appear to be in order before I explore the marijuana-crime link more systematically and fully. One has to do with the length of time that the marijuana intoxication lasts. Two facts bear on this issue. First, each episode of use generally produces an intoxication which lasts roughly three or four hours, at the most. Marijuana's effects wear off about three hours or so after the user smokes the drug. Secondly, from previous studies . . . as well as the survey whose data I am analyzing in this report, it is clear that the average, or median, level of marijuana use is roughly once a week. This means that the typical marijuana user is under the influence about three or four hours per week, or roughly 3% or so of his waking hours, and under a "normal" state of mind the remaining 97%. Now, it is possible that this tiny segment of time would influence some users in some significant way, but the fact of its briefness of duration ought to be kept in mind when reasoning about the impact of the drug on the lives of users. The daily user comprises roughly one marijuana user out of 10, and the individual who is high all, or nearly all, of his waking hours, probably constitutes about 1 or 2% of all marijuana smokers. These facts cannot be ignored in our exploration of the

causal connection between the effects of marijuana and criminal activities.

And the last issue I will raise in the marijuana effects topic has to do with the truthfulness of the answers given by users. A plausible objection to taking the word of users concerning the effects of the drug on them would be that they are untrustworthy—that they have a motive for lying, for portraying the drug and their experiences in a positive light. Actually, what nearly all researchers have found in an interview situation with drug users is that they very rarely lie; in fact, their honesty about themselves and their activities and experiences appears to be the rule, overwhelmingly. . . .

The overall picture that we receive from . . . various studies is that, like most interview subjects, marijuana users may occasionally lie or hide the truth, but their answers will, in general, be truthful. This does not mean that everything they say must be taken at face value—as with any other group of interviewees, anything which the researcher is capable of checking independently, and which we have data on, we should corroborate with what we learn in the interview situation. At the same time, we would be as fallacious in assuming that everything that marijuana smokers said to be true is suspect as if we accepted everything they said to be true in all respects. What all of this means is that we must reason with caution from self-reported data, use them whenever we must, and check them whenever we can.

IV. CRIMES UNDER THE INFLUENCE

The Philadelphia survey on marijuana use and crime asked several questions concerning 16 different offenses. The questions began as follows: "Many people in every community commit acts which others consider offenses, delinquent acts, and violations. Here is a list of these acts." The specific questions dealt with whether the respondent had ever committed each one, how often, how old he was when the offense occurred, whether he was caught by the police, and whether the respondent had been drinking, or was under the influence of marijuana, 24 hours or less before committing the act—as well as whether the respondent thought that using marijuana influenced him to commit the act; these questions were asked about the first as well as the most recent such offense, if they occurred. The offenses were: hurting someone in a minor way, hurting someone badly, carrying a knife, stealing a car, disturbing people, threatening to hurt someone, taking money, stealing from a store, making an obscene telephone call, forcing sexual intercourse with a woman, breaking into a house or store, damaging property, buying stolen property, setting off an alarm, carrying a gun, and using a weapon to steal. From these facts, it might be interesting to find out what proportion of acts involved some drug use occurring within 24 hours—and whether that drug is alcohol or marijuana. I will explain after the data are presented what these facts can and cannot tell us. We must not be too hasty in reading too much into any given set of data.

Table 2 presents summary information from this set of questions. I have presented figures for only six offenses: stealing from a store, damaging property, hurting someone in a minor way, breaking into a house or store, stealing a car, and hurting someone badly. Some of the crimes asked about were committed by so few respondents (such as forcing sexual intercourse) that any statistical analysis would be completely meaningless. Other offenses seem to be unrelated to the aggressive syndrome associated with marijuana use—such as buying stolen property. The six I

have chosen are, in any case, representative. The first three are relatively minor, and would usually be classified by the law as misdemeanors; the second two are considerably more serious, and would often be classified as felonies. Table 2 presents the proportion who drank alcohol, and smoked marijuana 24 hours or fewer before the crime was committed; the figures in the first two columns are for the first time the respondent committed the offense, and the second two columns are for the most recent time, if it occurred more than once.

What generalizations may we make from Table 2? First of all, committing these crimes is atypical. Not one of these six offenses was committed by a majority of the sample. Secondly the more serious the offense, the less likely it was to be committed. Minor offenses were committed at least once by between four and five out of every 10 respondents, but major offenses had been committed at least once by something like one respondent in 25. (And two of the offenses not in the table were rarer still; forcing sexual intercourse was admitted to by six respondents, or about one in 100, and using a weapon to steal was reported by only three respondents, or one out of 200.)

What about drugs and crime? Compared with *not* being under the influence, drugs tend to be atypical in the commission of crimes. For none of these categories, whether first offense or most recent, was being under the influence of either alcohol or marijuana characteristic of over a quarter of all offenses, and most are considerably below this. Most crimes here were committed when the offender was not under the influence of any drug, marijuana, or alcohol, when he was in a "normal" state of mind pharmacologically.* Secondly, in terms of absolute incidence, alcohol is involved in the commission of crime considerably more often than marijuana. Adding together all of the offenses committed 24 hours before each drug was used, alcohol had been used in conjunction with first offenses a total of 47 times, and marijuana only five times—a ratio of not quite 10 to one. For the most recent offenses, alcohol was involved a total of 66 times, and marijuana 19—a ratio of about three to one.

In conjunction with this point, it should be stressed that the classic, aggressive, violent crimes traditionally and historically associated with the marijuana intoxication are very, very rarely committed—by anyone, high or normal, user or non-user alike. Six men in this survey admitted to forcing a woman to have intercourse with him as a first offense, and three admitted to rape more than the first time. In two out of the six first-time cases, the offender said that he had been drinking 24 hours before, and in one out of the three most recent-time cases, drinking was involved as well. But in none of the six first time cases, and in none of the three recent-time cases, had anyone smoked marijuana 24 hours before. (None of the men had been apprehended for this offense, incidentally.) Only three of the men in the survey said that they had used a weapon to steal as a first offense, and two admitted this offense more than the one time—and none said that he had either drunk or smoked 24 hours before the offense.

*Several facts should be born in mind when considering this generalization. First of all, the survey asked about the use of each drug *24 hours before* the offense was committed or less—and hence, the respondent was not necessarily under the influence when the offense was committed, although certainly many respondents were under the influence at that time. Secondly, anyone who uses marijuana is far more likely to become intoxicated with each episode of use than is true of each episode of alcohol use.

Considering the fact that the typical marijuana smoker in this study had been intoxicated several hundred times for a total of well over a thousand hours, and therefore in a state of mind which, if the "causal" theory is correct, is aggressive and criminogenic, then this almost total absence of violent and aggressive crimes committed by users should be puzzling. This fact indicates that the "causal" theory may be inadequate and erroneous.

However, it is not possible to tell from Table 2 whether the commission of crimes is more frequent for alcohol or marijuana on a relative basis during the period of intoxication. That is, if anyone wanted to know whether a thousand hours of a marijuana or an alcohol intoxication was more like to result in the commission of various crimes, this table would not convey this information. Unfortunately, this survey did not ask a question on the frequency with which the respondents drank alcohol—or, indeed, whether they drank at all—so that an alcohol-marijuana comparison cannot be more systematically made. It is entirely possible that alcohol-related crimes are far more frequent than marijuana-related crimes, simply because alcohol is still, even in this sample, probably the drug of choice among young people, and is more often used than marijuana (just as *not* being under the influence of any drug is more frequently involved with crimes than being under the influence, simply because most people, most of the time, are not intoxicated). As to which drug is more "criminogenic" in the sense of what proportion of the time under the influence of marijuana vs. alcohol one commits various crimes cannot be determined from the data from this study. However, in *absolute* terms, alcohol is considerably more often used before crimes than marijuana.

Another generalization that may be made from Table 2 is that the contribution of marijuana from first offense to most recent offense grows somewhat relative to alcohol. That is, for the first offense, alcohol is used before it about 10 times as frequently as is marijuana, but for most recent offense, alcohol is only three times as frequent. This probably is a reflection of the following two trends: (1) Marijuana smoking is considerably more frequent today (i.e., closest in time when the most recent offense occurred) than a few years ago (i.e., closest in time when the first offense occurred), and hence, its frequency relative to alcohol would be greater in conjunction with any activity—criminal or non-criminal as well—simply because its use is more common; (2) Marijuana smoking is more common among young adults (the age group most closely represented by the age when last offense was committed) than among adolescents and pre-adolescents (the age group most closely represented by the age when first offense was committed)—and, moreover, as age rises, marijuana use rises faster than alcohol use rises, at least up until early adulthood. . . .

It is possible that, as marijuana usage increases, the number of crimes committed under the influence of this drug may increase as well. However, the question as to marijuana's *direct* contribution to the commission of crimes, especially aggressive crimes, is an independent issue, and one in need of exploration.

V. WHO COMMITS CRIMES AND WHO DOESN'T?

In this section, it is our job to explore two basic issues: (1) Do marijuana users commit crimes and offenses any more frequently than non-users do? (2) Are any variables with which marijuana use is strongly related *also* correlated with criminality? In the next section I will deal with a third question, and one which is probably the

most crucial one in this report: Can the marijuana-crime connection be explained mainly by the use of marijuana in and of itself, or is use itself dependent on third variables which themselves explain the commission of offenses? As the principal measure of committing crimes, this study has employed the number of different types of offenses admitted to in the 16 categories asked about. Naturally, there are many other crimes not asked about, and, in addition, some of these crimes would not correspond to the image most people would have of "classic" aggressive offenses—such as "disturbing people," or receiving stolen goods. However, as a *general index* or overall measure of criminality of different groups or categories of individuals, this one is as good as any others that have been employed, and is probably adequate for our purposes. (The survey, it must be noted, did not ask questions about any white collar crimes, which must be reckoned into an adequate measure of output of criminal behavior—but these crimes do not correspond with the public's image of aggressive crimes committed under the influence of marijuana, and so their absence is less relevant than would appear at first glance.) Throughout the remainder of this report, the number of crimes and offenses will be employed as the dependent variable—the outcome to be explained. And throughout, I will be examining the marijuana-crime connection—as well as other relationships—insofar as it bears on the basic issue.

Before the analysis proceeds, it should be pointed out that of the 16 offenses, not one of the violent crimes correlated with marijuana use in any meaningful way at all, and a very weak relationship was evidenced with only five of the offenses—stealing from a store, buying stolen property, disturbing people, damaging property, and hurting someone in a minor way (the last of which showing the weakest association of all). The statistical differences in rates of offenses between users and non-users rest on adding together a small number of weakly correlated offenses. When offense differences are discussed, the reader should not hold the mistaken impression that they indicate massive differences, or differences indicating a higher rate of classic, violent crimes among users. With that warning in mind, we may now proceed to user/non-user differences in offenses.

The first relationship to be presented, then, is whether marijuana users as a whole commit offenses any more frequently than non-users as a whole. The answer is yes. I have employed two indicators of marijuana use; one is frequency of marijuana use during the period of most recent use (which may have been in the past, or may be at present), and whether or not the respondent has ever, or has never, used marijuana. Both indicators of marijuana use correlate very powerfully with committing offenses. For both tables, the differences are significant beyond the .001 level, employing Chi-square as a test of significance, which means that the differences observed could occur at random only one chance in a thousand. This is considered extremely significant. There is a regular and step-wise relationship between frequency of use and committing offenses; the more that a given respondent smokes marijuana, the greater is the likelihood that he will have committed four or more offenses, and the lower is his likelihood of committing no offenses at all. Over a third (38%) of those who have never smoked marijuana said that they committed none of the 16 offenses asked about—but this was true of only one respondent in eight (or 12%) of the regular smokers. At the other end, there was a 17% difference between non-users and regular users (24% vs. 41%) in admitting to four or more of these offenses. Tables 3 and 4 present these data in detail.

We would be remiss in our duties as sensitive and acute social analysts if we ended the analysis there. The simple correlation between marijuana use and offenses may very well mask important and even more basic relationships buried beneath it. Marijuana is correlated in a simple manner with the commission of crimes, but does it remain correlated when controls are applied? In other words, is it a spurious relationship, or one which will remain when crucial variables are held constant? Which factors are also related to the commission of offenses—which might actually themselves explain the simple marijuana-crime connection? There are several such variables—race, age, education, the use of other drugs, and the respondent's involvement in the drug subculture. Blacks are significantly less likely to use marijuana (64% of the blacks in the survey said that they had tried marijuana, but 86% of the whites said that they had done so), but slightly more likely to admit to the commission of offenses—41% of all blacks said that they committed four or more offenses, but this was true of only 25% of all whites (see Tables 23 and 25). Does the marijuana-crime correlation hold up for blacks and whites separately? Age was also related to both offenses and marijuana. The oldest respondents (age 29-34) were least likely to have tried marijuana (61%), the youngest (15-20) were next least (73%), and the intermediate age groups (21-23 and 24-28) were most likely to have tried marijuana (82% and 80%). There was a linear relationship between age and offenses, however. The youngest group was least likely to have committed *no* offenses (20%), and most likely to have committed four or more (42%); the oldest group was most likely to have committed no offenses (35%), and least likely to have committed four or more (22%) (see Tables 29-31). Thus, we would want to know whether marijuana and crime still correlate in each age group separately. The same thing can be said for education (Tables 26-28), the use of drugs other than marijuana (Tables 11-16), and having friends who use drugs (Tables 17-22)—the relationship between marijuana use and crime could be mitigated or even transformed altogether if these third variables are considered. One possibility is that the marijuana-crime relationship is wiped out altogether with the application of these controls—that is, that the relationship is completely spurious. A second possibility is that the marijuana-crime connection may be specific to some groups or categories, but not others. And the third possibility is that the same original relationship remains basically unaltered, or even is strengthened, by the application of these controls.

Special attention ought to be paid to the drug-related variables. There is a powerful and significant association between the use of marijuana and the use of other drugs. Although recent studies have presented evidence that this basic relationship is probably not due to the effects of marijuana *per se*, but to friendships and associations made in conjunction with marijuana use . . . , the simple relationship between marijuana and other drugs is a statistical fact. There is, in addition, a strong and marked association with using drugs other than marijuana and the commission of crimes. Thus, a legitimate question to be explored is whether "marijuana only" users have a greater crime rate than non-users, whether the higher rate of the commission of offenses cannot be attributed largely or solely to using drugs other than marijuana.

VI. MARIJUANA USE AND CRIME: CAUSAL OR SPURIOUS

Our first clue as to the nature of the underlying relationship between marijuana use and crime is obtained by ex-

aming Table 5, which documents the association between number of offenses and marijuana use, taking into account the use of other drugs as well. Table 5 shows that "marijuana only" marijuana users are only very slightly more likely to commit crimes than non-users. The original nine percentage point difference between users and non-users in committing four or more offenses has shrunk to only two percentage points (in fact, only one percentage point—we are comparing 24.4% with 25.5%), and the original 19 percentage point difference between users and non-users in committing no offenses has been reduced to 13 percentage points. In fact, the "marijuana only" user is far more similar to the non-user in number of offenses committed than he is to the user of marijuana plus two or more other drugs. The application of the control involving other drugs clearly attenuates the marijuana-crime relationship, and much of the user-non-user differences in offenses committed can be traced to the fact that marijuana users are significantly more likely to use other drugs, rather than the use of marijuana per se.*

Our confidence in the lack of basic association between marijuana use itself and offenses—and our ability to attribute the simple original relationship to the use of drugs other than marijuana—is strengthened when we examine the relationship between frequency of use and offenses, holding the use of other drugs constant. Table 5A presents these data. Among "marijuana only" users, there is no statistically significant correlation between frequency of use and the commission of crimes—the differences are small, insignificant, and in no consistent direction. Among users of one other drug, likewise, frequency of marijuana use is extremely loosely associated with committing offenses—the differences which are observed are small, statistically insignificant, and point in no particular direction. And lastly, among users of two or more other drugs aside from marijuana, the association between frequency of marijuana use and the commission of the offenses described earlier is loose and not at all significant. Table 5A very strongly indicates the validity of the "spurious" model.

Closely related to the use of other drugs is a control which should be explored: the respondent's involvement with a drug-using subculture—with others who also use drugs. Naturally, as we saw in the last section, individuals who use marijuana tend to have friends who also use marijuana. What we would like to know is whether the social patterns they exhibit can be traced to their use of the drug, or to the fact that they have friends who use drugs. Thus, we should be very interested in looking at the individual who uses marijuana, but who does not have drug-using friends, as well as the individual who does not use marijuana, but has drug-using friends. If interesting changes take place in the original marijuana-crime correlation, then we have indications that it is the individual's social relations, and not his use of marijuana, per se, that determine marijuana use's correlation with crime. Tables 6 and 7 deal with this issue; they should be examined in conjunction with one another.

Among respondents with no marijuana-using friends (out of their 10 closest friends), as well as those with no drug-using friends at all, almost an identical relationship between marijuana use and crime obtains as in the orig-

inal Table 3. Marijuana users are significantly (but not strikingly) more likely to commit four or more offenses, and significantly less likely to commit none. The percentage differences in Tables 6 and 7 are almost the same (even slightly more) as those in Table 3—about 25% at the "none" end vs. 19% for the original table, and about 18% at the "four or more" end vs. 9% for the original table (Table 3). If we were to rely only on these segments of the table, we would be led to the inference that marijuana is meaningfully related to the commission of crimes.

However, an extraordinary thing happens to the other segments of the table: among those with drug-using friends, there is no relationship at all between marijuana use and committing offenses. The differences are so small as to be statistically insignificant. (And they are actually in the opposite direction—non-users are slightly more likely to commit four or more offenses than users are.) In other words the marijuana-crime relationship is completely wiped out by the application of controls—in this case, integration into the drug-using subculture. We are led overwhelmingly to the conclusion that *marijuana users tend to be somewhat more likely to commit crimes solely because they are part of a drug-using subculture*; the actual properties of marijuana appear to be completely unassociated with criminal behavior. Anyone (*whether he uses marijuana or not*) who makes friends and becomes involved with others who use drugs—especially others who use drugs in addition to and aside from marijuana—stands a higher likelihood of committing offenses, simply because this segment of the population tends to be more lax about obeying the law. It is merely because marijuana users tend to associate with others who are part of this subculture that their crime rate is somewhat higher. In other words, the marijuana-crime relationship—in terms of the causal or effects model—is *completely spurious*.

What of the marijuana-using isolate? What of those who use marijuana but who have no friends who use drugs—either marijuana or other drugs? How can we explain the fact that the original difference in offense rate between users and non-users were not wiped out among those without drug-using friends—in contrast to being wiped out among those who *had* drug-using friends? Looking back at Tables 6 and 7, we are struck by the fact that the offense rate of the marijuana-using group *without* drug-using friends is as high as the groups *with* drug-using friends. What does this indicate? First of all, involvement with a drug-using subculture is clearly not the *only* determinant of a high rate of committing offenses. Probably something else is at work. The fact that the offense differences wash out among those involved with the drug subculture indicates that use by itself (i.e., being high) cannot be a factor in the original marijuana-crime relationship—a difference cannot explain two things that are similar. The using isolate, however, is probably a qualitatively different social being from those who either do not use, or those who use and have friends who also use. The isolate is probably deviant in a variety of ways—crime being one of them. The fact that he uses in spite of having no friends who use (although he may have friends who do not use) means that he uses most of the time alone, has not integrated his activities into a social life or a subculture, and probably pursues some activities which the dominant society would judge to be eccentric and unusual. In other words, it is possible that his involvement with crime is related to his social isolation from a group which pursues drug activities similar to his own, rather than his use of marijuana. However, these remarks must be regarded as speculation, since more complete information is not available.

*The exploration of the "escalation" hypothesis—the question of whether or not marijuana "leads to" the use of other more dangerous drugs—would take us far afield in this report. The issue is dealt with in a separate report by the author prepared for the National Commission on Marihuana and Drug Abuse, however.

A related process occurs when race is employed as the control variable. Among blacks, the original relationship remains intact; marijuana users are significantly (although not markedly) more likely to commit four or more offenses, and less likely to commit none, than is true of non-users. (The relationship is significant at the .004 level, using Chi-square.) However, *among whites, the original relationship is completely washed out*; users are not at all more likely to commit offenses. Table 8 presents these data. The minor differences can be completely accounted for by random fluctuations; the relationship is not significant at any level.

When education is treated as the control variable in this relationship, the marijuana-crime connection follows a pattern parallel to the two previous explorations—that is, it is completely washed out for some groups, but remains for others. In Table 9, we see that marijuana users who have at least attended college, but not graduate school, are not any more likely to commit offenses than college non-users. The percentages committing four or more crimes, and those committing none, are almost identical for users and non-users alike. (The differences are insignificant, and due to random fluctuation.) However, among respondents with only a high school education, the same basic relationship produced in Table 3 is upheld: marijuana users are significantly more likely to have committed offenses than non-users. However, at least two variables are compounded here, since most respondents with a college education are white. Thus, the retainment of the original marijuana-crime correlation among high school education respondents, and its wash-out among college educated respondents, should not come as any surprise. However, among respondents with at least some graduate school education, the original relationship asserts itself; users are more likely to commit offenses than non-users. (The differences observed are significant at the .05 level; in other words, the differences have a one in 20 chance of occurring purely at random.) Table 9 presents the marijuana-crime relationship, holding education constant.

Using age as a control variable also produces mixed results. Among the two youngest age groups (15–20 and 21–23), the differences obtaining between users and non-users are statistically insignificant, and could have occurred by chance alone; in the youngest of these two groups, the non-user is slightly more likely to have committed four or more offenses, and in the next to youngest of these groups, the user is slightly more so—but in both, the differences are too small to be meaningful. In the 24-to-28-year-old group, the differences approach statistical significance, but they are not substantial (.07 level of significance, using Chi-square). However, among the oldest group (age 29 to 34), the same basic difference in offenses as obtained in the original relationship holds up here; users are about twice as likely to have committed four or more offenses as non-users (28% vs. 13%), and less than half as likely to have committed no offenses (21% vs. 58%). These data appear in Table 10.

VII. SUMMARY AND CONCLUSIONS

The central effort in this report has been to determine whether marijuana use, in and of itself, is meaningfully and causally related to the commission of crime. Two models have been used in the past to answer this issue: the *causal* model, which holds that using marijuana, being under the influence of the drug, actually does stimulate the will to commit antisocial acts, and the *spurious* model, which holds that marijuana use is merely a reflec-

tion of independent and more powerful forces, and that in itself, marijuana use is unrelated to criminal and aggressive behavior. Some small amount of research has been conducted in the past on this issue, but no consistent findings have been turned up; . . . It is because of these factual lacunae that the National Commission on Marijuana and Drug Abuse mandated a study of marijuana use and crime, which culminated in the Philadelphia survey, as well as this report.

The findings from this study strongly support the view that marijuana use *by itself* is not related in any meaningful or systematic fashion to criminal behavior, that marijuana use probably does not “cause” criminality. The “spurious” model appears to be a far more accurate description of the marijuana-crime connection than does the “causal” model. The use of marijuana *per se* is probably completely unrelated to criminal and aggressive behavior. The drug does not “cause” any significant number of users to commit crimes, or aggressive or violent behavior. The effects of the drug seem to be, from what can be gathered from the available data on the question, without criminogenic causality. This does not mean that it is not possible to commit crimes, including aggressive crimes, under the influence of marijuana—but that being high does not increase one’s probability of doing so, that on an hour-for-hour, crime-for-crime basis, there are probably no significant differences between being intoxicated on marijuana and being “normal,” not under the influence of any drug.

A wide variety of data have been brought to bear on the marijuana-crime issue.

First of all, regarding the subjective self-reported effects of marijuana, all indications are that the effects classically described as being related to aggressive behavior and the commission of crimes—feeling angry, frustrated, wanting to hurt someone, being willing to follow any and all suggestions of others, being deranged, wanting to do something violent—have no empirical support whatsoever; users consistently describe these “effects” as non-existent or as extremely rare and atypical, no different from normally. In fact, precisely the opposite is the case: if anything, the effects of marijuana would have far more to do with reducing the criminal “impulse,” whatever that might be, due to the fact that they tend to be in the direction of relaxation, feeling calm, of not wanting to move about, feeling somewhat drowsy, sleepy. Activity of any sort tends to be inhibited by the marijuana intoxication.

Secondly, the Philadelphia survey asked the respondents about using marijuana and/or alcohol 24 hours or less before various crimes were committed. Marijuana very rarely figured into the commission of crimes in any way. For only a tiny minority of all crimes committed was the respondent under the influence. This was *especially* the case for serious and aggressive crimes. Alcohol was far more likely to be used soon before criminal activity than marijuana.

The third type of information brought to bear on the marijuana-crime question was the self-admitted offense rate of users versus non-users. The total number of different types of crimes which respondents said that they had committed was compared. The simple relationship between using marijuana and committing offenses was positive and statistically significant, and there was also a high correlation between frequency of smoking marijuana and committing offenses. However, a wide range of other variables, themselves related to both crime and to marijuana use, were also correlated—race, education, age, the use of other drugs, and having drug-using friends. Thus, the issue became: is it the causal connection with

these third variables which produces the marijuana-crime simple correlation, or does the correlation hold up even when these factors are controlled? In other words, which is right, the causal or the spurious model? Is marijuana use merely dependent itself on larger, broader, more potent factors—or does it exert an independent power? Do users commit crimes more frequently than non-users because they use marijuana or because they happen to be the kinds of people who would have a higher crime rate, marijuana or no marijuana.

The evidence from these three-variable tests support the “spurious” model. The control tables show that the differences in crime rate between users and non-users is, in most cases, dependent not on marijuana use per se, but on these larger factors. The fact that the relationship disappears, or is wiped out, when *some* controls are applied shows that the marijuana-crime connection is dependent on sociological variables, and not chemical effects. When the use of other drugs was held constant, the marijuana-crime correlation was severely attenuated, and in some cases, washed out entirely. When the variable of having friends who use other drugs—both marijuana as well as stimulants, sedatives, hallucinogens and “hard drugs”—was applied, the relationship disappeared among those *with* drug-using friends, but not those who had no drug-using friends. When race was held constant, the marijuana-crime connection was wiped out completely among whites, but not blacks; among white marijuana users, their crime rate was not statistically different from non-users, but black users did have a higher crime rate than non-using blacks—similar in magnitude to the original relationship. When education was used as a control

variable, we saw that among college-educated respondents, the marijuana-crime correlation was non-existent, but it remained among respondents with a high school education, and for those who had attended graduate school. And lastly, age was applied as a control. Among the youngest groups, the marijuana-crime relationship was attenuated, but it remained somewhat strong among the two oldest age categories.

If there were truly a causal relationship between marijuana use and crime, these disappearing correlations would not occur. The application of sociological variables cannot wash out a chemical reaction in the user. The enormous variability dependent on social factors indicates that marijuana effects do not inherently produce behavior of a criminal nature. The kinds of people who use the drug tend to follow patterns of behavior regardless of whether or not they use marijuana. By itself, marijuana, use is not a potent producer of behavior, and certainly not criminal behavior. Individuals who commit criminal acts are those who would do so with or without the use of marijuana.

The data from this study support the conclusion, almost without qualification, that marijuana use does not cause criminal behavior.*

*A subsequent regression analysis with the six variables used independently as controls showed that when all six variables are applied simultaneously, the use of marijuana in and of itself accounts for less than 1% of the variance in committing offenses (personal communication by the author, 24 January 1972).

Table 1:
Subjective Effects of Marijuana

	Almost all the time	More than half the time	Less than half the time	Never or almost never	Total percent*
Relaxation	50	22	10	18	100
Care less what others think of what you do	16	18	21	45	100
Feeling of being able to do anything	6	5	13	77	101
More willing to follow others' suggestions	4	12	25	59	100
Feel more angry	1	3	8	88	100
Feel less angry	31	22	13	34	100
Have hallucinations	9	8	16	66	99
Feeling of drowsiness, sleepiness	22	25	25	27	99
Feeling of wanting to hurt someone	**	0	3	96	99
Feeling of frustration	3	4	16	78	101
Feeling of wanting to do something violent	**	**	4	95	99

*Total percent may not equal exactly 100, due to rounding. Percentages are based only on answers given; thus, the base figures vary from 411 to 418, due to a few nonresponses.

**Less than one-half of one percent

Table 2:**Being Under the Influence 24 Hours Before Committing Various Offenses***

	First offense			Most recent offense		
	Total N who Committed Offense	% Under influence Alcohol	Marijuana	Total N who Committed Offense	% Under influence Alcohol	Marijuana
Stolen from a store	208	1	**	154	3	2
Damaged property	102	14	0	67	24	6
Hurt someone, minor way	270	6	0	208	13	3
Broken into house or store	56	7	5	32	19	12
Stolen a car	24	17	0	8	25	0
Hurt someone badly	81	9	1	47	23	4

*Percentages are based on total N who committed the offenses, rather than on drinkers and users only, since a question on whether respondents drank or not was not asked, and hence, the two comparisons--percent of marijuana users who committed each offense vs. percent of total sample who committed each offense for alcohol--are in fact not properly comparable.

**Less than one-half of one percent

Table 3:

Number of Offenses by Ever used Marijuana

		Number of Offenses:				N	Total Percent
		None	One	Two or Three	Four or More		
Ever	Yes	19	19	30	33	416	101
Use Marijuana:	No	38	15	24	24	136	101

Table 4:

Number of Offenses by Frequency of Smoking Marijuana

		Number of Offenses:				N	Total Percent
		None	One	Two or Three	Four or More		
	Never	38	15	24	24	136	101
	Very Rarely (1-2#/year)	23	23	28	26	171	100
	Occasionally (1-2#/month)	19	17	27	37	106	100
	Regularly (1#/week or more)	12	14	33	41	123	100

Table 5:

**Number of Offenses by Marijuana Use, Controlling for
the Use of Other Drugs**

		Number of Offenses:				N	Total Percent
		None	One	Two or Three	Four or More		
	Non-user	39	16	20	24	123	99
	Marijuana only	26	20	28	26	220	100
	Marijuana Plus One Other Drug	14	21	36	30	78	101
	Marijuana Plus Two or More Other Drugs	8	16	28	48	118	100

Table 5a:

**Number of Offenses by Frequency of Marijuana Use,
Controlling for the Use of Other Drugs**

Use of Other Drugs: Marijuana Only

	Number of Offenses:				N	Total Percent
	None	One	Two or Three	Four or More		
Very Rarely (1-2#/year)	29	22	26	23	124	100
Occasionally (1-2#/month)	24	20	26	30	46	100
Regularly (1#/week or more)	19	14	39	28	36	100

Use of Other Drugs: Marijuana Plus One Other

	Number of offenses:				N	Total Percent
	None	One	Two or Three	Four or More		
Very Rarely (1-2#/year)	11	32	25	32	26	101
Occasionally (1-2#/month)	26	17	39	17	23	99
Regularly (1#/week or more)	8	12	42	39	28	100

Use of Other Drugs: Marijuana Plus Two or More

	Number of Offenses:				N	Total Percent
	None	One	Two or Three	Four or More		
Very rarely (1-2#/year)	0	21	47	32	19	100
Occasionally (1-2#/month)	8	14	22	57	37	101
Regularly (1#/week or more)	10	15	26	49	61	100

Table 6:
Number of Offenses by Marijuana Use, Controlled for
Marijuana-Using Friends

		<u>Marijuana Friends: None</u>					
		Number of Offenses:					
		None	One	Two or Three	Four or More	N	Total Percent
Ever Use Marijuana:	Yes	25	18	30	28	40	101
	No	51	20	18	11	74	100

		<u>Marijuana Friends: At Least One</u>					
		Number of Offenses:					
		None	One	Two or Three	Four or More	N	Total Percent
Ever Use Marijuana:	Yes	18	20	30	33	369	101
	No	16	9	41	35	69	101

Table 7:

**Number of Offenses by Marijuana Use, Controlled for
Friends' Use of Other Drugs**

Drug-Using Friends: None

		Number of Offenses:				N	Total Percent
		None	One	Two or Three	Four or More		
Ever Use Marijuana:	Yes	23	16	30	30	43	99
	No	51	19	18	12	78	100

Friends Use Marijuana Only

		Number of Offenses:				N	Total Percent
		None	One	Two or Three	Four or More		
Ever Use Marijuana:	Yes	25	20	30	26	154	101
	No	26	3	31	40	35	100

At Least One Friend Uses Another Drug

		Number of Offenses:				N	Total Percent
		None	One	Two or Three	Four or More		
Ever Use Marijuana:	Yes	12	20	31	38	206	101
	No	9	18	27	45	22	99

Table 8

Number of Offenses by Marijuana Use, Controlling for Race
Black

		Number of Offenses:				N	Total Percent
		None	One	Two or Three	Four or More		
Ever Use Marijuana:	Yes	17	12	25	47	134	99
	No	39	10	22	29	78	101

White

		Number of Offenses:				N	Total Percent
		None	One	Two or Three	Four or More		
Ever Use Marijuana:	Yes	19	22	33	26	269	101
	No	25	25	27	23	42	100

Table 9

Number of Offenses by Marijuana Use, Controlling for Education
Education: High School or Less

		Number of Offenses:				Total	
		None	One	Two or Three	Four or More	N	Percent
Ever Use Marijuana:	Yes	16	13	20	50	113	99
	No	42	12	17	29	69	100

Education: At Least Some College

		Number of Offenses:				Total	
		None	One	Two or Three	Four or More	N	Percent
Ever Use Marijuana:	Yes	20	16	36	29	179	101
	No	27	16	27	30	37	100

Education: Graduate School

		Number of Offenses:				Total	
		None	One	Two or Three	Four or More	N	Percent
Ever Use Marijuana:	Yes	20	29	29	22	123	100
	No	40	20	33	7	30	100

Table 10:

Number of Offenses by Marijuana Use, Controlling for Age

Age: 15 to 20

		Number of Offenses:				N	Total Percent
		None	One	Two or Three	Four or More		
Ever	Yes	18	14	28	40	100	100
Use							
Marijuana:	No	27	11	14	49	37	101

Age: 21 to 23

		Number of Offenses:				N	Total Percent
		None	One	Two or Three	Four or More		
Ever	Yes	18	24	29	29	131	100
Use							
Marijuana:	No	28	28	28	17	29	101

Age: 24 to 28

		Number of Offenses:				N	Total Percent
		None	One	Two or Three	Four or More		
Ever	Yes	19	17	32	33	127	101
Use							
Marijuana:	No	34	9	41	17	32	101

Age: 29 to 34

		Number of Offenses:				N	Total Percent
		None	One	Two or Three	Four or More		
Ever	Yes	21	22	29	28	58	100
Use							
Marijuana:	No	58	13	16	13	38	100

Table 11:

**Ever Use Various Drugs by Ever Use Marijuana
(percent answering "yes")**

		Stimulants	Sedatives	Hallucin- ogens	"Hard Drugs"*	N**
Ever	No	34	20	30	11	419
Use						
Marijuana: Yes		4	5	0	2	137

Table 12:

**Ever Use Various Drugs by Frequency of Using Marijuana
(percent answering "yes")**

	Stimulants	Sedatives	Hallucinogens	"Hard Drugs"*	N**
Never	4	5	0	2	137
Very rarely (1-2#/year)	19	11	10	1	173
Occasionally (1-2#/month)	40	17	41	9	107
Regularly (1#/week or more)	54	38	51	27	123

*The interview question asked the respondent if he had ever used "hard drugs, such as heroin, morphine, demerol, cocaine or codeine."

**Ns vary slightly for each column, due to a small number of nonresponses.

Table 13:

Number of Offenses by Ever Use Stimulants

	Number of Offenses:				N	Total Percent
	None	One	Two or Three	Four or More		
Yes	7	18	33	42	150	100
No	29	18	26	26	399	99

Table 14:

Number of Offenses by Ever Use Sedatives

	Number of Offenses:				N	Total Percent
	None	One	Two or Three	Four or More		
Yes	7	15	28	50	88	100
No	26	19	28	27	463	100

Table 15:

Number of Offenses by Ever Use Hallucinogens

	Number of Offenses:				N	Total Percent
	None	One	Two or Three	Four or More		
Yes	14	18	30	38	126	100
No	26	18	28	29	425	101

Table 16:

Number of Offenses by Ever Use "Hard Drugs"

	Number of Offenses:				N	Total Percent
	None	One	Two or Three	Four or More		
Yes	9	13	19	60	47	101
No	25	19	29	28	504	101

Table 17:

Ten Closest Friends Marijuana Users by Ever Used Marijuana

		None	One to Four	Five to Eight	Nine or Ten	N	Total Percent
Ever Use Marijuana:	Yes	10	18	30	42	411	100
	No	56	29	9	6	133	100

Table 18:

Ten Closest Friends Marijuana Users by Frequency of Smoking Marijuana

	None	One to Four	Five to Eight	Nine or Ten	N	Total Percent
Never	56	29	9	6	133	100
Very Rarely (1-2#/year)	16	29	33	22	171	100
Occasionally (1-2#/month)	4	12	32	52	104	100
Regularly (1#/week or more)	5	9	26	60	121	100

Table 19:

Number of Offenses by Ten Closest Friends Marijuana Users

Number of Offenses:						N	Total Percent
	None	One	Two or Three	Four or More			
None	42	19	22	17		114	100
One to Four	22	13	35	30		112	100
Five to Eight	18	19	26	37		135	100
Nine or Ten	16	20	30	34		180	100

Table 20:

		Ten Closest Friends Use Other Drugs by Ever Use Marijuana				N	Total Percent
		None	Use Marijuana Only	One to Three	Four or More		
Ever Use Marijuana:	Yes	11	38	25	26	409	100
	No	58	26	14	2	136	100

Table 21:

		Ten Closest Friends Use Other Drugs by Frequency of Using Marijuana				N	Total Percent
		None	Use Marijuana Only	One to Three	Four or More		
Never		58	26	14	2	136	100
Very Rarely (1-2#/year)		17	45	27	11	169	100
Occasionally (1-2#/month)		6	36	29	30	104	101
Regularly (1#/week or more)		7	30	21	43	122	101

Table 22:

Number of Offenses by Ten Closest Friends Other Drugs							
		Number of Offenses:					
		None	One	Two or Three	Four or More	N	Total Percent
None		41	18	22	18	121	99
Friends Use Marijuana Only		25	16	30	29	189	100
One to Three Friends Use Other Drugs		13	23	33	31	122	100
	Four to Ten Friends Use Other Drugs	11	16	27	46	108	100

Table 23:

Ever Use Marijuana by Race

	Yes	No	N	Total Percent
Black	64	36	222	100
White	86	14	316	100

Table 24:

Frequency of Smoking Marijuana by Race

	Never	Very Rarely (1-2#/year)	Occasionally (1-2#/month)	Regularly (1#/week or more)	N	Total Percent
Black	38	27	13	23	213	101
White	14	36	26	24	308	100

Table 25:

Number of Offenses by Race

	Number of Offenses:				N	Total Percent
	None	One	Two or Three	Four or More		
Black	25	11	24	41	218	101
White	20	23	33	25	314	101

Table 26:

Ever Used Marijuana by Education

	Yes	No	N	Total Percent
High School	62	38	185	100
At least some College	83	17	218	100
Graduate School	81	20	154	101

Table 27:

Frequency of Smoking Marijuana by Education

	Never	Very rarely (1-2#/year)	Occasionally (1-2#/month)	Regularly (1#/week or more)	N	Total Percent
High School	39	28	11	22	178	100
At Least Some College	18	29	25	29	212	101
Graduate School	20	42	22	16	150	100

Table 28:

Number of Offenses by Education

	None	One	Two or Three	More Four or	N	Total Percent
High School	26	13	19	42	182	100
At Least Some College	21	16	35	29	216	101
Graduate School	24	28	29	19	153	100

Table 29:

Ever Used Marijuana by Age

	Yes	No	N	Total Percent
15-20	73	27	137	100
21-23	82	18	161	100
24-28	80	20	161	100
29-34	61	39	99	100

Table 30:

Frequency of Smoking Marijuana by Age

	Never	Very rarely (1-2#/year)	Occasionally (1-2#/month)	Regularly (1#/week or more)	N	Total Percent
15-20	27	23	22	28	135	100
21-23	19	28	23	31	156	101
24-28	21	42	18	20	154	101
29-34	41	37	15	8	96	101

Table 31:

Number of Offenses by Age

	None	One	Two or Three	Four	or More	N	Total Percent
15-20	20	13	24	42		137	99
21-23	20	24	29	27		160	100
24-28	22	15	33	30		159	100
29-34	35	19	24	22		96	100

Summary and Conclusions: Marihuana and Crime

The Commission's review of the available evidence bearing on the relationship between marihuana use and criminal, aggressive and delinquent behavior has yielded the following information.

The once prevalent belief among the general public and the professional law enforcement, criminal justice and research communities that marihuana causes crime, violence, aggression and delinquency has moderated appreciably over the years. Recent evidence indicates that increased attention has been devoted, instead, to a possible statistical correlation rather than a cause-effect relationship.

At present, however, considerable confusion and uncertainty exists among both the general and professional publics, among youth and adults, and among marihuana users and non-users about the relationship between marihuana and criminal, aggressive or delinquent behavior. The confusion and uncertainty stem from a general lack of knowledge and understanding about the effects of the drug, including its potential for physical addiction. Many persons are still under the misapprehension that marihuana is addicting and that crimes are committed in order to support a drug "habit."

In general, recent changes in public and professional opinion have corresponded with and reflected the increased use of marihuana, particularly within the middle class segment of society; more direct observation of and professional experience with the marihuana user; new and more enlightened information about the drug and its effects; and concomitant changes in the public image of the user.

There is no systematic empirical evidence, at least that drawn from the American experience, to support the thesis that the use of marihuana either inevitably or generally causes, leads to or precipitates criminal, violent, aggressive or delinquent behavior of a sexual or nonsexual nature.

Laboratory studies of effects have revealed no evidence to show that marihuana's chemical properties are, by themselves, capable of producing effects which can be interpreted as criminogenic; that is, that marihuana is an independent cause of criminal or aggressive behavior. If anything, the effects observed suggest that marihuana may be more likely to neutralize criminal behavior and to militate against the commission of aggressive acts.

The research community has recently gathered considerable evidence to show that marihuana and criminal, aggressive and delinquent behavior are statistically and significantly correlated when

measured together in isolation from variables which are related to marihuana use and other forms of antisocial behavior. The data also show, however, that this statistical association either attenuates significantly or disappears completely when the proper statistical controls are applied.

In other words, the observed relationship between the use of marihuana and criminal, violent, aggressive and delinquent behavior is spurious. It is dependent on such extra-pharmacological factors as the age, race and education of the user; the type of community in which he lives; his past history of psychosocial maladjustment; and his involvement in a criminal or delinquent subculture (use of other drugs; drug buying and selling activities; associations with friends who also use, buy and sell cannabis or other drugs).

To reiterate what Professor Goode has so cogently stated,

If there were truly a causal relationship between marihuana use and crime, these disappearing correlations would not occur. The application of sociological variables cannot wash out a chemical reaction in the user (1972:52).

To put it still another way, to believe that marihuana causes criminal, violent, aggressive or delinquent behavior is to confuse the effects of the drug with the people who use it.

From the perspective of marihuana's relationship to antisocial behavior of a criminal or violent nature, the drug cannot be said to constitute a significant threat to the public safety. If its use, therefore, is to be discouraged, it must be discouraged on grounds other than its role in the commission of criminal or violent or delinquent acts.

The enormous increases in marihuana arrests over the past several years are ample evidence that the police have taken seriously their role of maintaining law and order with respect to marihuana use and that they have responded to public pressure and concern about the increase in marihuana use. Yet, in their experience with the marihuana user they have been placed in the unenviable position of having to enforce a law either disregarded or discredited by large segments of the population they serve.

Over and over again they have seen their efforts in this respect negated by the *de jure* or *de facto* modification, if not nullification, of the laws against possession by prosecutors, judges and even legislators. Their increasing frustration and demoralization, therefore, at least with respect to the marihuana user, is quite understandable.

These other officials, however, are likewise placed in a difficult position; for they, too, must enforce and apply the criminal law, and they, too, must respond to public pressures and concerns. In some instances, they have demonstrated particular re-

sistance to criminalizing the user and subjecting him to criminal penalties which are deemed to be unwarranted if not unwise.

In the case of marihuana, recent changes in law enforcement practices with respect to the user have, in fact, reflected the increased use and public tolerance of marihuana. The statutory changes now taking place at the state and local levels are further evidence of the trend toward greater public acceptance of the user. In these instances, the laws and their enforcement were altered because they no longer performed the symbolic function of expressing society's disapproval of marihuana use.

Marihuana and Driving

The United States Department of Transportation has estimated that in 1970, more than 111 million Americans were licensed drivers and that there were approximately 109 million vehicles registered and regularly traversing America's streets and highways. The Commission-sponsored National Survey (Abelson, et al., 1972) has revealed that approximately 21 million or 15% of all American adults 18 years and over have tried marihuana and that about 6.9 million adults currently use the drug.

At the present time, there is no reliable estimate of the proportion of marihuana users who drive while "high," but America's tragic experience with highway accidents and fatalities involving persons driving under the influence of alcohol raises serious questions about the extent to which marihuana impairs driving skills and performance and thereby constitutes a public safety hazard on this nation's thoroughfares.

In recent years, public safety experts, along with the medical and scientific communities, have devoted increasing attention to the effects of any mind-altering drug on driving, but there is as yet little evidence to inform discussion. As part of its more general concern with the impact of marihuana on public safety, the Commission has reviewed the available research and has concluded that the evidence which presently exists is, at best, inconclusive.

In view of this finding and prior to a rather brief summary of the knowledge we now have, the Commission feels compelled to urge the public to consider these findings as only tentative, to adopt an extremely cautious attitude about the effects of marihuana on driving skill and performance, and perhaps most importantly, to avoid driving at all while under the influence of any mind-altering drug or intoxicant.

THE CURRENT STATE OF KNOWLEDGE

The literature on drugs and driving contains several references to the role of drugs, including marihuana, in traffic violations, accidents and fatalities. They differ considerably, however, in the nature and extent to which they influence or affect driving behavior (Waller, 1965; Chetta, 1967; Commission on Narcotic Drugs, 1968; Third Tri-annual Congress on Traffic Accidents, 1969; Waller, 1970; Klein, Davis and Blackbourne, 1971; National Institute of Mental Health, 1972).

The studies examine the relationship between marihuana and driving and tend to be either statistical and enumerative with regard to traffic accidents or experimental with respect to the physiological and psychological effects of marihuana use deemed to be related to driving skill and performance. All of them suffer to one degree or another from an overabundance or dearth of extraneous variables and have, therefore, precluded generalization of the results and the production of conclusive, and valid findings.

The difficulty in interpreting the data gathered from statistical or enumerative studies of traffic accidents derives primarily from the inability to isolate precise cause. There are no tissue, urine or blood analysis methods currently and systematically in use outside the laboratory, similar to those available for alcohol, for determining the presence of marihuana in the bodily fluids of drivers.⁵

Statistical Studies

The statistical or enumerative studies generally can be characterized as two types. In the first type, samples of arrested marihuana or other drug law violators are selected and their traffic violations or accident rates are compared with those in the general population. In the second type, samples are drawn initially from lists of persons known to have committed traffic violations or been involved in traffic accidents. The samples are then divided into persons who in some way are identified as marihuana users and those who are not and the incidence of traffic violations or accidents in the two groups is then compared.

Waller (1965), compared the crash rates per unit miles of driving of known marihuana users with those of other drivers of similar age distribution. He found that the crash risk was not increased by the use of marihuana.

A similar study yielding similar results was

⁵ Dr. E. J. Woodhouse, a chemist, is now in the process of developing a marihuana testing method. At the present time he reports being able to detect the presence of marihuana by analyzing urine samples (Polak, 1971).

performed in the State of Washington (Crancer and Quiring, 1968). There were no significant differences in the crash rates per 100 drivers between those who did use marihuana and those who did not. The researchers compared the driving records of persons arrested for illegal drug use (100 narcotics users, 123 dangerous drug users and 79 marihuana users) with those of 687,228 licensed drivers living in the same general driving environment (King's County, Washington). Comparisons were made of the number of accidents, the number of violations and the type of violations accumulated between January 1, 1961 and October 1, 1967.

All three drug using groups had significantly higher accident and violation rates than did the comparison group matched for age and sex; the accident rate for the marihuana users was 39% higher; for the narcotics users, 29% higher; and for the dangerous drug users, 57% higher. The violation rates were 180% higher, 149% higher and 168% higher, respectively.

Table 9 below shows the percentage of marihuana users and county drivers, by sex, with none and 10 or more traffic violations and accidents between January 1, 1961 and October 1, 1967.

Since the majority of the users were first arrested for their illegal drug use in 1964, the researchers compared their violation rates before and after that time. The data show a violation rate of 1.78 per marihuana driver prior to 1964 (January 1, 1961 to June 30, 1964); the rate increased to 3.44 per driver between July 1, 1964 and October 1, 1967. For the same time periods, the county group's violation rate per driver increased from 0.44 to 0.53.

The violation rates for both reckless and hit-and-run driving were significantly higher for the marihuana users than for the county comparison group.

In short, these data suggest that marihuana users are much more likely to have many violations and accidents and are much less likely to have clear accident and violation records than are a comparison group of drivers drawn from the same general

population. These findings are difficult to interpret more precisely, however, because such variables as the number of miles driven and overall driving experience were not taken into account.

A survey of 12,453 Virginia high school students was conducted during 1970 by the Virginia Highway Safety Division (Ferguson and Howard, 1971). The objectives of the survey were to determine the extent of drug use in the Virginia high school population and to assess the number of traffic crashes which could be caused by drug-impaired drivers.

The data show that 2.9% of the sample reported experiencing, either as a passenger or driver, at least one traffic crash in which drug use "could have been a causal factor." The data also show that the students were more likely to attribute the crashes to marihuana (54%) than to other drugs (46%). Use of marihuana was found to be slightly more common than was the use of other drugs among drivers involved in non-fatal collisions but was used with equal frequency in those drivers involved in fatal crashes (p. 31).

The researchers suggest as an explanation for their findings the fact that marihuana usage was greater among this population (12.3%) than was the use of other drugs (7.7%). This explanation is not completely adequate, however, in that the survey ignores both the possible presence of alcohol along with marihuana and other drugs, either separately or in combination. As such, it cannot be said that marihuana causes more accidents than do other drugs, including alcohol.

Klein, Davis and Blackbourne (1971) surveyed students at four academic institutions in Florida in an effort to assess the role of marihuana in traffic involvements. Respondents were divided into five groups of marihuana users: (a) non-users, (b) previous users, (c) using less than four times a month, (d) using four to eight times per month, and (e) using more than eight times per month. For each group information was obtained relative to the frequency of alcohol and tobacco use; respondents' ability to judge speed, time and reaction time; traffic involvements; and license revocations. In addition, respondents were asked their opinion about whether or not persons under the influence of marihuana should be permitted to operate aircraft and various other vehicles, including taxis and private automobiles.

With respect to traffic involvements, the data show that 18% of the infrequent users and 53% of the frequent users reported having been stopped by the police while under the influence of marihuana. The data also show that as the frequency of use increases, so too does the number of license revocations.

Table 9.—MARIHUANA USERS AND COUNTY DRIVERS HAVING NONE AND TEN OR MORE TRAFFIC VIOLATIONS AND ACCIDENTS, BY SEX, JANUARY 1, 1961-OCTOBER 1, 1967

(Figures in Percentages)

	Marihuana users		County drivers	
	Male	Female	Male	Female
None.....	10.0	33.3	41.1	67.7
10+.....	22.9	11.1	2.2	0.1

Source: Crancer and Quiring, 1968:9.

As Nichols (1971) has pointed out, however:

Apparently no attempt was made to compare the number of times they were stopped while under the influence of marihuana as opposed to the number of times they were stopped while not under the influence. Thus, the data do not give any indication of whether the violations were due to the effects of marihuana or whether they were the result of poor driving habits in the first place (pp. 28-29).

Both experimental and quasi-experimental approaches to assessing the effects of marihuana on driving suffer from methodological shortcomings and inconsistent results. The primary deficiency in the experimental investigations lies in their inability to hold constant the numerous external variables which actually affect driving behavior and which, therefore, precludes valid comparisons of actual driving performance with that simulated in a controlled but unrealistic environment. In the quasi-experimental studies using interviewing techniques, the accuracy of self-reports becomes a question which must be raised with respect to the effects of marihuana on driving skills and performance.

The data derived from these studies, however, suggest that marihuana does interfere, at least in some users, with the ability to judge time, speed and distance; with reaction time; and with the ability to control the vehicle and respond to an emergency situation (Zinberg and Weil, 1969; James, 1970; Hochman and Brill, 1971; Klein, et al., 1971).

Data from a survey of 10% of the undergraduate students at UCLA (Hochman and Brill, 1971) show that one-third of all marihuana users drive occasionally while "high." Of the chronic users, 42% drive frequently while high and 10% always drive while "stoned" (p. 22).

According to the researchers, "both (marihuana) users and non-users were universally of the opinion that (marihuana) 'intoxication' affected driving, but users thought that they compensated by being more cautious, driving more slowly, and concentrating on the driving" (p. 22). The researchers also report that as usage of marihuana becomes more chronic, "fear" and avoidance of driving while intoxicated decreases and the ability to compensate for the drug's effects increases.

With respect to traffic violations, the data show that 4% of occasional and chronic marihuana users had received traffic tickets when they were intoxicated by the drug but that none had been discovered to be intoxicated at the time.

These findings corroborate those from an earlier study (Zinberg and Weil, 1969) in which the researchers stated that "users appear to be able to

compensate 100% for the non-specific effects of ordinary doses of marihuana on ordinary psychological performance" (p. 39). In another report Weil (1969) wrote that "it appears that once a person becomes accustomed to the effects of cannabis, he can compensate fully for the drug's influence on performance of tasks of ordinary complexity" (p. 6).

Experimental Studies

Controlled laboratory experiments have attempted to measure these and other effects on driving with greater specificity. Manno and his associates (1970) found that there are significant impairments of motor and mental performance attributable to marihuana.

In an experiment conducted by Frank and his colleagues (1971), marihuana smokers demonstrated "a marked and very consistent increase in the amount of time required to recover from glare . . . This ranged up to four times as long with a mean peak of almost twice as long (171%) after smoking marihuana. . . . Furthermore, this increase in glare recovery time persisted for several hours" (p. 9) and did not seem to be dose-related.

These researchers did not find significant differences between marihuana users and non-users, however, in pulse rate, time estimation or dilation of the pupils.

With respect to marihuana's effect on emotional reactions, Dr. S. E. Miller (1959) suggested that "these drugs (including marihuana) have singular abilities for changing normal emotional reactions, even causing individuals to become oblivious or indifferent to their surroundings" (p. 864). Klein and his colleagues (1971), however, urge against generalizing these findings from the laboratory situation to the complex task of actual driving.

Crancer and his coworkers (1969) conducted a study designed to determine the effects of a "normal social marihuana high" on simulated driving performance among 36 experienced marihuana smokers and compared the effects they discovered with those occasioned by alcohol use.

The researchers found that experienced marihuana users under conditions of a "normal social marihuana high" (from two cigarettes totalling 1.7 grams of THC) accumulated significantly more speedometer errors than under control conditions. No significant differences were found, however, relative to accelerator, brake, signal, steering or total errors in simulator scores.

Comparing the effects of alcohol (at a blood level of 0.10%—the legal limit of intoxication)

and marihuana intoxication (1.7 grams THC), the researchers concluded that moderate intoxication by marihuana was less detrimental to simulated driving performance than was the presence of alcohol at the 0.10% blood level. The mean error scores were 84.46 for the control group, 84.49 for the marihuana group and 97.44 for the alcohol group (p. 6).

There have been several criticisms leveled at this study, however, and several researchers have cited contradictory findings. Frank and his associates (1971) have pointed out the fact that the subjects did not have complete control over their simulated drive.

Kalant (1969) noted that "it does not follow automatically that lack of effect of a drug on the simulated task will correlate with lack of effect on the actual task" (p. 640). He also criticized the use of dissimilar doses of marihuana and alcohol for the comparison and in this regard stated that "the finding that a heavy dose of alcohol caused more impairment than a mild dose of marihuana is neither surprising nor helpful in assessing the relative effects of the two drugs in the relative doses in which they are normally used" (p. 640).

Lastly, Kalant pointed out that Crancer and his colleagues failed to indicate if any measures were actually taken to ensure effective absorption of the doses by the experimental subjects. This may be important if the findings of dose dependent impairments observed by Dagirmanjian and Boyd (1962) and Isbell and his associates (1967) are valid.

Although Crancer and his fellow researchers did not feel that the impairments found were related to either dosage level or experience with the drug, this latter finding is also subject to question in view of the earlier findings of the Mayor's Committee on Marihuana (1944) and Weil and his colleagues (1968) that the performance of drug-naive subjects was more impaired than was that of experienced marihuana users.

In a more recent simulator study, attention was directed to the effects of marihuana on risk acceptance (Dott, 1971). The experimental situation involved the placement of 12 experienced marihuana users under four conditions (non-smoking, placebo, low dose, and high dose) in order to compare subjects' reactions to various passing situations, some of which required an immediate response to an emergency.

The data show that even though more accidents occurred under the two marihuana conditions than under the placebo (and normal) condition, the differences were not significant. Significant differences were found in the number of passes com-

pleted and in the time needed to make pass decisions. Not only did the marihuana smokers complete fewer passes (174 in placebo condition, 153 in low dose condition, and 133 in the high dose condition), but they took more time to make the pass decisions while under the influence of the drug. The researcher concluded that "marihuana appears to make the subject less willing to accept risk, and it delays elective decision reaction time. Effects were most noted in situations which did not have a high attention demanding value. . . . In those situations which were of an emergency nature and which demanded immediate attention and response . . . , no drug effects were noted" (p. 28).

Dott also found, in contrast to Frank and his associates (1971) that pulse rate did seem to be affected by marihuana intoxication.

Based upon a comparison with the same experiment performed years before in relation to alcohol (Light and Keiper, 1969), Dott stated that "the effects of marihuana on driving behavior are more subtle and less hazardous than the effects of alcohol."

McGlothlin (1971) is presently conducting another simulator study and is attempting to measure the effects of marihuana, methadone and alcohol on simulated driving, attention, information processing abilities and other measures related to driving efficiency such as peripheral vision, depth perception and glare recovery. At this time, five experiments have been conducted and the researcher has stated that:

concentrated and divided attention for both auditory and visual modalities are significantly impaired by smoked marihuana containing 15 mg. THC. . . . In general, where impairment was found for the marihuana treatments, it appears to be equivalent to that resulting from a blood-alcohol level of about 0.01%. Frequent marihuana users (one or two times per week) typically showed less impairment than those using less frequently (p. 22).

The inconclusive and controversial nature of the research to date suggests that there is enough of a potential risk involved to both the individual and the public safety to recommend strongly against driving while intoxicated—no matter what the intoxicant. Although marihuana does not seem to produce serious impairments of driving skills or performance, to say that the drug does not at all adversely affect driving behavior or that it may not be a factor in traffic violations or accidents is to misrepresent the current state of knowledge. As the National Institute of Mental Health (1972) has noted, "obviously, more research is needed in elucidating the role of various drugs on highway accidents . . ." (p. 220).

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part three

legal

aspects

I.

Control of Marihuana, Alcohol and Tobacco

This chapter traces the legislative histories of marihuana, alcohol, and tobacco.

In the first section, "History of Marihuana Legislation," the origins of the intoxicant use of cannabis in this country during the early 20th century are noted along with the subsequent state and federal statutes enacted prohibiting use, distribution, production and sale.

Proscriptions began appearing on the books after about 1914 and continued through 1971, which brings the reader to the point subsequently covered by the rest of this Appendix.

Early colonial laws regarding alcohol are described in the beginning of the next section, "History of Alcohol Prohibition." From that point in history, the national movements which spread over the next two centuries, culminating in the enactment of National Prohibition from 1920 to 1933, are described.

The various state modes of control which appeared after Repeal are then briefly enumerated along with a discussion of the present state controls over production, distribution, and sale of intoxicating beverages.

The introduction of tobacco cultivation in 1613 in the colony of Virginia opens the third section, "History of Tobacco Regulation." The widespread use of tobacco in the latter 1800's into the first half

of the 20th century is traced along with the increasing pressure from groups fearful of tobacco's deleterious effects on health.

Federal sumptuary regulations are outlined along with a discussion of the impact further federal controls might have on the tobacco economy.

*History of Marihuana Legislation**

"Marihuana" or Indian hemp, labeled *Cannabis Sativa L.* by Linneas in 1753, has been used for centuries in Asia and Africa for its intoxicant properties. It was cultivated as a source of fiber in North America in the early 17th century. Yet, cannabis was not used as an intoxicant in North America until the late 19th century, and in the United States until the early 20th.

Cannabis use was prevalent in Mexico by 1898. Widely cultivated and growing wild, the drug was readily available for eating, drinking, or smoking, the latter being by far the most common method of ingestion. Soldiers in Pancho Villa's army are

*This section is drawn from the manuscript of *The Marihuana Consensus: A History of American Marihuana Prohibition*, in press 1972, by Professors Charles H. Whitebread, II, and Richard J. Bonnie of the University of Virginia Law School.

reputed to have used the drug freely. The path of the introduction of marihuana smoking for pleasure into the United States was not via Europe, which transmitted the fiber, oil, and medicinal uses of hemp, but via Mexico and the West Indies.

The plant and its intoxicant use in the United States in the first decades of the 20th century encountered a political and social climate which was not particularly conducive to hearty growth. Gradually criminal prohibitions appeared on the statute books of nearly every state where the drug was used.

Well into the thirties, however, marihuana smoking attracted little attention from the national policy and opinion apparatus which was deeply ensnared in drug matters of much wider social impact than the limited, regional use of this new drug.

The "villain" theory of American marihuana prohibition—attributing the drug's illegal status to the Federal Bureau of Narcotics and its long-time head, Harry J. Anslinger—has been particularly popular in recent years.

Although the federal narcotics bureaucracy, with Commissioner Anslinger at the helm, was to become marihuana's leading antagonist in the mid-thirties, a restrictive public policy toward the drug was well-rooted locally before that time. During the "local" phase of marihuana prohibition, lasting roughly from 1914 to 1931, practically every state west of the Mississippi, except for two, had prohibited use of the drug for non-medical purposes.

The real story of marihuana policy in the United States begins as a series of distinctly local tales.

STATE PROHIBITION: 1914-1930

Marihuana use was a familiar phenomenon in the border towns of Texas and New Mexico after 1910. First to note the use of the drug were El Paso law enforcement officials who quickly secured a local ordinance in 1914 banning sale and possession of the drug. El Paso officials and local representatives of the Customs and Agriculture Departments of the Federal Government agitated for state and federal legislation to combat the "killer weed."

After an official request by the Secretary of Agriculture, the Secretary of the Treasury issued a decision under the Food and Drug Act prohibiting importation of cannabis after 1915 for other than medical purposes.

On the state level in Texas, legislation was slow in coming. Marihuana use was still a local problem in the border towns and it attracted little statewide interest. The Texas Legislature included

marihuana when it passed a general narcotics statute in 1919, prohibiting transfer of listed narcotics except for medical purposes (Texas, 1919: 278). In 1923, the statute was tightened to prohibit possession with intent to sell (Texas, 1923: 156-157). The legislature's failure to prohibit simple possession or use reflected an objection to interfering with private conduct.

The degree of public interest in narcotics and marihuana is well-illustrated by the limited newspaper coverage. In its only direct reference to the 1923 marihuana legislation, the *Austin Texas Statesman*, which had given the legislature extensive coverage, stated:

The McMillan Senate Bill amended the anti-narcotic law so as to make unlawful the possession for the purpose of sale of marihuana or other drugs. Marihuana is a Mexican herb and is said to be sold on the Texas-Mexican border (*Austin Texas Statesman*, 1923).

Even more surprising is the fact that the *El Paso Times* did not mention the McMillan bill before or after its passage.

New Mexico in the same year prohibited sale, cultivation and importation of cannabis. Mere possession was not expressly prohibited but anyone found in possession was presumed to have imported the marihuana illegally (New Mexico, 1923: 58-59). The *Santa Fe New Mexican*, hometown newspaper of the bill's sponsor, paid scant attention, noting only that:

The Santa Fe representative, however, had better luck with his bill to prevent sale of marihuana, cannabis indica, Indian hemp or hashish as it is variously known. This bill was passed without any opposition. Marihuana was brought into local prominence at the penitentiary board's investigation last summer when a convict testified he could get marihuana cigarettes anytime he had a dollar. The drug produces intoxication when chewed or smoked. Marihuana is the name commonly used in the Southwest and Mexico (*Santa Fe New Mexican*, 1923).

In addition to coming in via Mexico, marihuana was being smuggled in by sailors from Cuba and other points in the Indies via New Orleans. Dr. Frank Gomila, Commissioner of Public Safety of New Orleans, began his campaign for federal legislation which would later bear fruit. He observed that the traffic was quite organized amounting to thousands of kilograms a year:

... [T]he custom was to keep [marihuana] in warehouses or storerooms for further distribution. It was sold by the wholesaler to the retailer who in turn put the 'weed' through a process known as 'sweating.' The dried leaves and stems were soaked in sugar water and dried on butcher's brown papers (Gomila and Lambow, 1938: 29).

According to Dr. Gomila and the newspapers, the demand in New Orleans in the mid-twenties was so great that the "peddlers" were able to be-

come exceptionally prosperous by dividing the market. One had exclusive jurisdiction over the blacks unloading the fruit boats, another over the lobby in a certain hotel, and so forth. It should be noted that marihuana was also available at the local pharmacy without a prescription before 1923 in Texas and 1924 in Louisiana. After that marihuana had to be bought on the street unless the user could successfully forge a prescription.

Different pictures emerge of the marihuana user in El Paso and San Antonio on the one hand and New Orleans and Galveston on the other. In the border towns, he was a Mexican laborer, indolent to some, volatile to others. Local authorities were, by and large, unable to generate any significant public or political interest, although there were no political objections to making the Mexican weed illegal.

In the port cities, however, the marihuana user was a "dope fiend," the basest element of American society. He was a narcotics addict, a pimp, or a gambler; she was a prostitute. In New Orleans, marihuana was simply another narcotic in a city with a major narcotic problem. It was always open to sensationalism.

Even before public attention was excited, however, the prevalence of marihuana use came to the attention of the President of the Louisiana State Board of Health, Dr. Oscar Dowling. On August 21, 1920, he advised the Governor of the increasing availability of marihuana, a "powerful narcotic, causing exhilaration, intoxication, delirious hallucinations, and its subsequent action, drowsiness and stupor. . ." (Jones, 1920).

At the same time, Dr. Dowling wrote to the Surgeon General of the United States, Dr. Hugh Cummings, to advise him of the increasing traffic in morphine, opium, and marihuana, and to seek federal cooperation.

An interesting sidelight of this request for assistance from Washington is that four months later Dr. Dowling was to become embroiled in a bitter battle with the Federal Government over an order to close his pet project, the New Orleans morphine clinics (Dowling, 1920). Ultimately he would lose, and one of the earliest attempts to deal with narcotics addiction would be suppressed for a half-century (Lindesmith, 1967: 135-161).

Very little, however, was done about the marihuana issue until the press seized upon it. In the fall of 1926, the *New Orleans Item* dispatched an army of reporters among the smoking and selling population.

A series of articles published by the more widely circulated *Morning Tribune* (both the *Item* and the *Tribune* were owned by the same publishing

company) exposed the immense profits being made and commented upon the volatile effects of the drug upon its "addicts." It was reported that marihuana:

Numbs the sense, creates wild fancies and has a hypnotic effect upon the user, making his will easily subordinated to that of others.

What emerged from these articles, however, was not a vision of addicts on the streets and pushers on the docks but rather peddlers who lurked on playgrounds seeking to entrap young minds. "Over two hundred children under fourteen are believed to be addicted to the marihuana habit," the paper reported, and "at least 44 schools were definitely being infected" (Gomila and Lambow, 1938: 29-31).

Local policy-makers wasted no time. The New Orleans Police Department immediately launched a round-up. They arrested more than 150 persons for violation of a law which had lain dormant for two years (Gomila and Lambow, 1938: 29-31; WCTU, 1928).

Dr. Dowling soon circulated "a warning to parents, guardians, and teachers of children against this menace" (WCTU, 1928: 1). The Women's Christian Temperance Union jumped on the bandwagon, focusing its attacks on the "soft drink" bars which had sprung up all over New Orleans during Prohibition:

The soft drink stand and the corner drug store have taken the place of the saloon as a social meeting place. Here is where marihuana and liquors can sometimes be bought (WCTU, 1928: 3).

Beyond these immediate effects, a more substantial impact of the local policy reaction in New Orleans was the formation of a tightly knit coterie of New Orleans law enforcement, public health, and social welfare officials who would carry their campaign to Washington, with ultimate success.

The drug and the practice of smoking it spread during the mid-twenties from the Gulf Coast and border town points-of-entry in two directions—north and west from the border together with its ethnic identity and north and east from New Orleans with its identity as a narcotic and enslaver of youth.

Practically every state west of the Mississippi River prohibited the possession or sale of marihuana during the period 1915 to 1930. Most of them acted by 1930: California (1915), Iowa (1921), Nevada (1923), Washington (1923), Arkansas (1923), Nebraska (1927), and Wyoming (1929).

The Bureau of Immigration records the entry of 590,765 Mexicans during this period, two-thirds of them remaining in Texas, the others settling in states in the Rocky Mountain area, most of them as

farm laborers (U.S. Bureau of Immigration, 1915 to 1930).

Whether motivated by outright ethnic prejudice or by simple discriminatory disinterest, the proceedings before state legislatures resembled those in Texas in 1923. There was little, if any, public attention and no debate. Pointed references were made to the drug's Mexican origins and sometimes to the criminal conduct which inevitably followed when Mexicans ingested the "killer weed."

The Colorado Legislature first prohibited possession, cultivation and sale of the drug in 1927, the year after the use of marihuana noticeably increased (Colorado, 1927: 309). At that time, according to a subsequent newspaper report, the drug was "used almost exclusively . . . by the Mexican population employed in the beet fields" (*Rocky Mountain News*, 1931).

Similarly, in 1929, the Montana Legislature amended its general narcotic law to include marihuana, prohibiting use, sale or possession without a prescription (Montana, 1929: 5). On seven different days from June 24 to February 10, the date of the bill's passage, the *Montana Standard* succinctly noted the progress of the bill through the legislature. The legislature's attitude was characterized in the January 27 issue:

There was fun in the House Health Committee during the week when the marihuana bill came up for consideration. Marihuana is Mexican opium, a plant used by Mexicans and cultivated for sale by Indians. "When some beet field peon takes a few rares of this stuff," explained Dr. Fred Fulsher of Mineral County, "he thinks he has just been elected President of Mexico so he starts out to execute all his political enemies. I understand that over in Butte where the Mexicans often go for the winter they stage imaginary bullfights in the 'Bower of Roses' or put on tournaments for the favor of 'Spanish Rose' after a couple of whiffs of marihuana. The Silver Bow and Yellowstone delegations both deplore these international complications." Everybody laughed and the bill was recommended for passage (*Montana Standard*, 1929: 3).

About the same time, Mexican laborers had begun to appear in Idaho and the mayor of Boise remarked:

The Mexican beet field workers have introduced a new problem—the smoking in cigarettes or pipes of marihuana or grifo. Its use is as demoralizing as the use of narcotics. Smoking grifo is quite prevalent along the Oregon Short Line Railroad; and Idaho has no law to cope with the use and spread of this dangerous drug (WCTU, 1928: 3).

Idaho passed a law in 1927 (Idaho, 1927: 98).

By 1931, the Texas Legislature finally got around to prohibiting possession of marihuana. By now alcohol prohibition had withdrawn any philosophical barrier to making possession illegal. The *San Antonio Light* reported that:

At last the state legislature has taken a definite step toward suppression of traffic in a dangerous and insanity-

producing narcotic easily compounded of a weed (marihuana) indigenous to this section. This newspaper has urged the passage of prohibitory legislation and is gratified that the solons at Austin have acted, even if tardily, in the suppression of traffic in a drug which makes the addict [read Mexican] frequently a dangerous or homicidal maniac (*San Antonio Light*, 1931).

In the East, appearance of the practice was not a necessary prerequisite for prohibition. That Maine (1913), Massachusetts (1914), Vermont (1915), and Rhode Island (1918) barred the sale of cannabis without a prescription before 1920 does not indicate that marihuana smoking had appeared there on any significant scale. Rather, in the course of anticipating and implementing the national anti-narcotics policy declared by the Harrison Act in 1914, medical representatives on the drafting committees recommended the inclusion of "another narcotic" to which addicts could resort once the other opiates became difficult to obtain.

The *New York Times* in 1914 described cannabis as a "narcotic [having] practically the same effect as morphine and cocaine," (*New York Times*, 1914: 6) and it noted in an editorial that:

[T]he inclusion of cannabis indica among the drugs to be sold only on prescription is only common sense. Devotees of hashish are now hardly numerous enough here to count, but they are likely to increase as other narcotics become harder to obtain (*New York Times*, 1914: 8).

By 1923, the *New York Times* referred to marihuana as the city's "latest habit-forming drug" when reporting its exhibition at a Women's Club meeting (*New York Times*, 1923: 24). Finally, in 1927, whether responding to an increase in use or to the substitution admonition, the legislature included marihuana in its definition of "habit-forming drugs" in a comprehensive narcotics bill (New York, 1927: 1695).

The situation in Chicago paralleled that in New York until 1927. Large Mexican communities developed in Chicago and Gary, Indiana, during the twenties and marihuana smoking became common in these areas and among journeymen musicians as well. As in New York, there was little public concern. The New Orleans pattern took over around 1927, however, when the attention of local law enforcement officials was suddenly drawn to the Mexicans and their "muggles." One law enforcement official reported that:

There are about 7,000 Mexicans in Gary, 10,000 in Indiana Harbor and 8,000 in South Chicago. . . . The Mexicans depend on the steel mills, railroads, and construction gangs for employment. Many are drifters when slack labor conditions prevail. . . . [T]wenty-five percent of these Mexicans smoke marihuana. In fact, many of them make their living by raising and peddling the drug (Paul, 1929: 4).

A situation perceived to be so widespread was

naturally considered likely to infect the rest of the community. As in New Orleans, reports started to appear that high school students were smoking the weed (Paul, 1929: 1; *Chicago Tribune*, June 3, 1929).

Since there was then neither state nor federal legislation prohibiting sale of marihuana, the local United States attorney declared war armed with an Internal Revenue statute prohibiting production and transfer of "a cigarette substitute" on which tax had not been paid. In June 1929, he raided wholesale houses "believed to have disposed of large quantities of marihuana cigarettes, sold to school pupils and other youthful thrill-seekers." He arrested nine men "most of them Mexicans" (*Chicago Examiner*, June 22, 1929). At the same time, local officials began to use a statute which prohibited transfer of "any cigarette containing any substance deleterious to health" (*Chicago Examiner*, June 19, 1929).

The *Chicago Tribune*, lobbying heavily for anti-marihuana legislation then pending before the Illinois Legislature, reported that day-to-day progress of the enforcement activity (*Chicago Tribune*, July and October, 1929). Every stall in the legislature earned a banner headline such as:

BAN ON HASHISH BLOCKED DESPITE RAVAGES OF DRUG

In an article appearing in June, 1929, the paper noted:

The number of addicts is growing alarmingly according to authorities, because of the ease with which [marihuana] can be obtained. The habit was introduced a dozen years ago by Mexican laborers . . . but it has become widespread among American youths and girls even among school children.

The legislation, however, was killed.

Marihuana prohibition had become widespread. In states where either Mexicans or the drug had appeared, its use was quickly suppressed.

Soon after being apprised of its presence, local lawmakers invoked the criminal law. In New Orleans, Denver, and Chicago the spectre of a doped school population was the cornerstone of the prohibitory effort.

And, during alcohol prohibition, paralleled by the local phase of marihuana prohibition, it was naturally imperative to suppress a drug which frustrated alcohol users might substitute for their customary intoxicant.

THE UNIFORM NARCOTIC DRUG ACT

Following the *ad hoc* local phase of marihuana legislation in the United States was the national-

ization phase. During this period marihuana became integrated at both the state and federal levels with the nation's narcotics policy which had been manifested forcefully in Congress' adoption of the Harrison Narcotics Act in 1914.

The Harrison Act, a taxing measure, required registration and payment of an occupational tax by all persons who imported, produced, dealt in, sold or gave away opium, cocaine or their derivatives. The Act required all legitimate handlers of these narcotics to file returns setting forth in detail their use of the drugs.

Since the Act also provided that only legitimate users could register and no one but a registered user could obtain the specified form, any transfer by an illegitimate user was a violation of the Act. For those failing to comply with its registration requirements, the original Harrison Act provided penalties of not more than \$2,000 in fines or more than five years imprisonment, or both.

Drafted as a tax law rather than an outright criminal statute, the Act was intended to do indirectly what Congress believed it could not do directly: regulate possession and sale of the opiates. However, because the Act essentially was a revenue-raising measure imposing a tax on transfers of narcotics, it could not effectively prohibit the possession of drugs.

This indirect regulation of narcotics traffic had a number of significant consequences. First, since the Act could not penalize users of addiction directly, there was an immediate need for complementary residual state legislation in order to deal effectively with the drug problem.

Second, the enforcement of the Act was assigned to the Internal Revenue Service in the Treasury Department. The first enforcement agency for the Harrison Act was the Narcotics Division of the Prohibition Unit of the Internal Revenue Service created in 1920 (Schmeckebier, 1929: 143). This division was incorporated in the Prohibition Bureau which was created in 1927 (Act, 1927: 1381).

In 1930, the enforcement of the narcotics laws was severed from the Bureau of Prohibition and established as the separate Bureau of Narcotics in the Treasury Department (Act, 1930: 585). The existence of this separate agency has done as much as any single factor to influence the course of drug regulation from 1930 to 1970 (King, 1953: 736).

Although the impact of the Bureau on the passage of the Uniform Narcotic Drug Act and the Marihuana Tax Act will be explained in detail in subsequent sections, it is important here to note that the existence of a separate bureau having responsibility only for narcotics enforcement and

for educating the public on drug problems inevitably led to a particularly prosecutorial view of narcotics addiction and the use and abuse of all drugs.

After the passage of the Harrison Act in 1914, there remained a considerable lack of uniformity regarding the offenses prohibited and the penalties imposed by the several states.

In 1919, the American Medical Association asked the Commissioner of Internal Revenue to call a conference to consider better control of traffic in narcotic drugs. The profession was uncertain of its obligations in the matter because they were faced with an amalgam of conflicting laws. The A.M.A. asked that the wholesale, retail, and manufacturing drug interests be among those attending, along with delegates from the medical profession in each state. The proposal received no official or unofficial response either from the Commissioner of Internal Revenue or the Bureau of Prohibition.

Nevertheless, the American Medical Association, through its own Council on Health and Public Instruction, did hold a conference in early 1922 during which a uniform state narcotic control law was presented. At the November meeting of that conference, there were present 15 representatives of 10 pharmaceutical organizations and two representatives of the medical profession.

The draft of a uniform law was approved unanimously by all present. The American Medical Association set out to codify the draft and to send it for approval to each of the constituent organizations (White, August 3, 1932; Woodward, August 6, 1932). After securing approval, all the associations agreed to pursue enactment first in New York.

The general lack of uniformity in anti-narcotics legislation, the weakness of state enforcement procedures, and the growing hysteria about dope fiends and criminality converged in several requests outside the medical community for a uniform state narcotic law (Anslinger and Tompkins, 1953: 159).

The drafting of the Uniform Narcotic Drug Act must also be viewed against the background of two larger movements: (1) the trend toward the creation and dissemination of uniform state laws by the National Commissioners on Uniform State laws, a group to which each state sent two representatives appointed by the governor; and (2) the general concern in the late 1920's and early 1930's with interstate crime, manifested, for example, by the creation in 1930 of the nearly autonomous Federal Bureau of Investigation. Because the concept of states' rights and narrowly construed federal power was then so powerful, an appeal to the Na-

tional Commissioners was the inevitable recourse for those pressing for uniform anti-narcotic regulation.

DRAFTING THE UNIFORM ACT

By 1924, the Commissioners had appointed a Committee to draft a uniform narcotic drug act. At the 1925 meeting of Commissioners, the chairman of the Committee reported that he himself had prepared a first tentative draft based on the New York Act, the Washington state legislation, the Harrison Act, and a bill then before the New York Legislature. Presumably this was the one drafted by the A.M.A. Conference after its 1922 meeting.

The chairman noted, however, that Dr. William Woodward, head of the A.M.A.'s Bureau of Legal Medicine and Legislation, with whom he had only recently conferred, had made "some very valuable suggestions." Because the tentative draft had already been printed before these suggestions, he requested that it "not be read but be re-committed to the Committee" (1925 *Handbook*: 977-985). This first draft included cannabis in the list of "habit-forming drugs," although all such drugs could be distributed and used for medical purposes (1925 *Handbook*: 978).

A second tentative draft was presented in 1928 and again the draft was not discussed at the conference but recommitted for further study. The second draft was essentially an exact copy of the 1927 New York Statute. It also included cannabis in the class of habit-forming drugs (1928 *Handbook*: 75-78, 323-333).

There was a lack of concern on the part of the Commissioners themselves with the whole narcotics problem between 1924 and 1928. The President of the Conference, introducing Dr. Woodward, said:

In view of the importance of the act I think it would not be amiss to listen to the Doctor for a few minutes, that he may point out to us why it is important. In some of the states we do not recognize the importance because it has not been called to our attention (1928 *Handbook*: 76-77).

Nor was the Bureau of Prohibition particularly concerned at this time with the cannabis provision. Lack of official concern and interest continued to be the Bureau's attitude toward the second tentative draft (Nutt, June 13, 1929).

Since neither the Commissioners nor federal narcotics officials were particularly concerned about state and local control of narcotics generally, and marihuana in particular, it seems clear that neither was responsible for the inclusion of marihuana in the category of "habit-forming drugs." Rather, it would appear that it was included in the

first draft because that had been drawn from the 1923 Washington statute which had listed cannabis.

Insofar as the second draft was a copy of the 1927 New York Act, inclusion of cannabis in this draft is not unusual. Few, if any, of the persons involved in the drafting were concerned about marihuana smoking or even aware of its use.

Two third drafts were submitted, the first in 1929 and the second in 1930. The initial one closely resembled the second tentative draft, and once again it included cannabis in the category of "habit-forming drugs." Again, the growth, distribution, and possession of cannabis was prohibited except for medical purposes.

The nascent Congressional interest in marihuana in 1929 and the Bureau of Prohibition's subsequent resistance to amending, and thereby endangering, the Harrison and Export and Import Acts, caused the Bureau to take full notice of this 1929 third draft. Like its predecessors, however, the initial third draft was recommitted for further study (1929 *Handbook*: 43, 332-346).

The second third tentative draft, submitted in 1930, was the first to remove cannabis from the definition of "habit-forming drugs" and to include only a supplemental provision for dealing with the drug (1930 *Handbook*: 485, 97).

When the Conference of Commissioners met to consider the second third tentative draft, Judge Deering, the Chairman of the Committee on the Uniform Narcotic Drug Act, recommended its re-commission for further study because the Committee had not yet had an opportunity to consult the newly created Bureau of Narcotics.

At the time of this conference, August 14, 1930, no one had yet been appointed Commissioner of the Bureau, although Harry J. Anslinger was Acting Commissioner (1930 *Handbook*: 126-127). The Senate confirmed Anslinger's appointment as Commissioner on December 18, 1930.

The Bureau of Narcotics then became actively involved in the drafting process. Commissioner Anslinger was pressing for inclusion of the cannabis provision. He stated that he felt the limited medical use for cannabis was far outweighed by the need to control potential cannabis addiction (Anslinger, July 28, 1930).

Dr. Woodward and the pharmaceutical industry advocated optional inclusion of marihuana on the one hand, and federal narcotics representatives urged not only inclusion but elimination of medical use, on the other.

The fourth tentative draft retained the optional cannabis provision. At a session before the convening of the full Conference of Commissioners from

September 9-12, 1931, Commissioner Anslinger and A. L. Tennyson of the Bureau met with Judge Deering to discuss the Bureau's feelings about the fourth tentative draft.

At this time Commissioner Anslinger stated that the Bureau felt strongly that inclusion of cannabis in the state law ought to be mandatory. Moreover, the Bureau urged that the only successful way to deal with the marihuana drug traffic, because of its domestic nature and the easy availability of the weed, was to prohibit the cultivation of the plant altogether and to find some substitute for its limited medical use (Tennyson, September 16, 1931). However, the fourth tentative draft presented to the Conference of Commissioners included the optional marihuana provision. And, the Conference tentatively approved the fourth tentative draft and directed the Committee to prepare a final draft (1931 *Handbook*: 127-128, 390-402).

The American Medical Association played a key role in the drafting process prior to 1931. Their efforts had been largely responsible for consideration of the Uniform Drug Act in the first place. From the beginning in 1925, Dr. William Woodward, the Director of the A.M.A.'s Bureau of Legal Medicine and Legislation, actively assisted in the drafting of the Act and widely circulated the drafts to interested persons for their comments.

It appears, however, that Dr. Woodward's personal style and the preeminent position of the American Medical Association in the drafting process were resented by the two remaining interest groups—the Federal Bureau of Narcotics and the retail and wholesale pharmaceutical associations. The Bureau had been commenting on drafts only *after* they had been drawn by the A.M.A. and did not feel it was playing an active role in the drafting process. The pharmaceutical industry felt that their interests were considered only peripherally and that they had been excluded from the heart of the drafting process.

As a result of the dissent, a conference of interested parties was scheduled before the final draft was to be presented to the Conference of Commissioners.

Present at this preliminary conference on September 15, 1932, were representatives of the Drug Committee, the Federal Bureau of Narcotics, the Department of State, the Public Health Service, the American Medical Association, and delegates from the drug industry and other medically-related industries and organizations. *The final version of the Uniform Narcotic Drug Act was hammered out at this session.* The Bureau was central to the drafting process and Commissioner Anslinger made a major effort to involve the drug

manufacturers and the wholesale and retail drug trade in it to protect the Act from possible subsequent political disagreement (Anslinger, August 1, 1932). Finally, the conference agreed on a draft to be presented to the National Conference.

The manufacturers of drug products were strongly opposed to the inclusion of cannabis under any criminal regulatory scheme. Representatives of the industry opposed a mandatory cannabis provision. The final conclusion reached by all the parties present was:

After considerable comment, it was decided to eliminate Section 12 (Cannabis) and leave it to the Conference of Commissioners as to whether it should be included under the general provisions of the Act (Report of Preliminary Conference, 1932: 23).

The Bureau was no longer insisting on the mandatory inclusion of an absolute marihuana prohibition; it did not want to risk the opposition of the drug industry to the entire Act.

The fifth tentative draft did, however, include a significant change in form which would have important consequences in the decades to come. Although the marihuana provision remained supplemental to the main body of the Act, any state wishing to regulate the sale and possession of marihuana was instructed, simply, to add cannabis to the definition of "narcotic drugs." All the other provisions of the Act would then apply to marihuana as well as to the opiates and cocaine. The Commissioners adopted this form as it had been prepared at the September 15, 1932, preliminary Conference.

The only recorded opposition to the adoption of the final draft came from some Commissioners who objected to tying the Uniform State Law to the terms of the federal Harrison Act. This last obstacle was overcome by the argument that a number of states already had passed such legislation so that the states' rights problem need not stand in the way. The Act was adopted 26 to 3 (1932 *Handbook*: 107).

ENACTMENT OF THE UNIFORM ACT BY THE STATES

After final acceptance of the Uniform Act, the Bureau set to work at once to secure state enactment—including an adequate marihuana provision. A comprehensive campaign was undertaken in the press, in legislative chambers, and in any other forum to gain public support for the Uniform Act.

In addition, perceiving the absence of public awareness of marihuana and needing to encourage positive action to overcome the drug's optional status, the Bureau also sought to arouse public

interest in marihuana through "an educational campaign describing the drug, its identifications and its evil effects" (Federal Bureau of Narcotics, 1937: 59).

That there was little general knowledge about cannabis is illustrated by the fact that as late as 1934, it was necessary to show marihuana to the New York police so that they could recognize it growing or in dried, smokable form (*New York Times*, 1934: 6).

The Bureau's district supervisors and local agents were campaigning actively in the legislatures before which the Act was pending. A press campaign was conducted across the country to gain the support of civic groups and other interested parties. Mr. Anslinger sought editorial support in newspapers (Anslinger, October 22, 1936) and assisted in the drafting of articles for popular magazines (Anslinger, December 23, 1936). To mobilize the Bar, Bureau officials wrote an article for law journals explaining the need for the Uniform Narcotic Drug Act (Anslinger, 1932: 52 Tennyson, 1932: 55).

Despite these efforts, it appears that the Uniform Act had a rough time in state legislatures during its early life. By April 26, 1933, only two states had enacted it in full. As late as March 1935 only 10 states had enacted the Uniform Law.

A number of significant objections had emerged in the state legislatures considering the passage of the Uniform Narcotic Drug Act. First among these was the potential cost to the state of enforcing the Act. Second, there was concern over the number of registrants who would have to be licensed due to the belief that the Uniform Act would require special licensing of doctors, dentists and veterinarians. Third, the limit on the amount of exempt preparations which could be sold caused a great deal of technical difficulty with the Act. Fourth, many criticized the right of the court to revoke or suspend the license to practice medicine or pharmacy. And finally, there seemed to be widespread misunderstanding of the record-keeping requirements of the Act.

Although these objections were largely administrative, they nevertheless posed what appeared to be serious stumbling blocks to the successful passage of the Uniform Law in all the states.

The combination of public apathy and administrative resistance necessitated a new approach in generating public interest. Beginning in late 1934 Commissioner Anslinger gradually shifted the focus of the FBN's educational campaign away from the inability of federal law enforcement agencies to deal effectively with the local drug

problems to the need to cope with the new drug menace—marihuana.

The clearest reflection of the change in Bureau policy is found in two official statements of Commissioner Anslinger, one made in 1933 and the other in 1936.

The 1933 statement explains the need for a Uniform Narcotic Drug Law and emphasizes United States international obligations, the need for more effective coordination in law enforcement, and the impact the law will have on the dangers of morphine, cocaine, and opium addiction (FBN Paper, July 1933). In the later statement, however, more than half of the time is devoted to a discussion of the "worst evil of all," the marihuana problem.

To aid the new approach's objective, Commissioner Anslinger made speeches and contributed articles to journals. The most influential of his efforts was "Marihuana—Assassin of Youth" which appeared in the widely circulated *American Magazine* in July 1937 (Anslinger and Cooper, 1937).

The FBN files contain more than 50 letters addressed to the Commissioner which say: "Your article was the first time I ever heard of marihuana."

Among the most effective proponents of the Uniform Act was the Hearst newspaper chain. These papers began editorializing in favor of enactment within days after the Act had been approved in 1932.

The Hearst chain was not alone. A Birmingham, Alabama, paper on August 22, 1935, emphasized the need to control marihuana as a reason for adopting the Act (*Birmingham Age-Herald*, August 22, 1935). A *Washington Post* columnist in September, 1934, devoted three-quarters of his article to marihuana with quotes from Anslinger and Stanley urging adoption of the Uniform Act (*Washington Post*, September 29, 1934).

Other large-city newspapers such as the *Cleveland Plain Dealer* and the *St. Louis Star Times* kept a steady, if intermittent, stream of anti-marihuana articles flowing in the period just before the passage of the Uniform Act in those areas. In Missouri, especially, local concern generated by the extensive coverage in the *Star Times* speedily pushed the legislature to adopt the Uniform Act.

Often it has been supposed on the basis of this increased coverage that the use of marihuana increased around 1935. Since there was some larger design involved, however, a firm conclusion is unwarranted. At the same time, it is

possible that use did spread after the publicity campaigns, especially among the young.

Judging from the tremendous expansion in coverage by the *New York Times* beginning in 1935, the evidence supplied by the LaGuardia Commission in its 1944 Report and the leap in enforcement activity, marihuana finally came to New York City in the 1930's, though then probably on a smaller scale than in Denver and the border towns of Texas.

Apart from the press, another influential participant in the marihuana campaign, especially after the Repeal of Prohibition, was the Women's Christian Temperance Union. Although the WCTU had distributed a pamphlet on marihuana as early as 1927, their publication, the *Union Signal*, does not reflect any significant interest either in the Uniform Act or marihuana until 1934. Before that year the "narcotic" receiving the most attention was nicotine. Beginning in 1936, however, the *Union Signal* had a direct line to the FBN national office, and from then on every issue contained material on marihuana (WCTU bound volumes, yearly).

The World Narcotic Defense Association and its head, Richmond P. Hopson, were also involved in the drive for state enactment. They were continually in postal contact with almost every state legislator in the country (WNDA, 1937). The most well-financed group in the campaign, the Association underwrote national broadcasts and distributed a lengthy pamphlet on marihuana in 1936.

The General Federation of Women's Clubs also contributed energetically. The Federation educated its membership about the need for the Uniform Act and about the evils of marihuana in particular. The Chairman of the Federation's department of legislation noted:

The situation concerning club women particularly is the accessibility of the frightening degenerating marihuana weed, which is rolled in cigarettes . . . and has been playing such havoc with young high school boys and girls (WCTU, 1936: 285).

The state and local clubs immediately began to unite local legislators and to conduct educational campaigns for parents, teachers and children (WCTU, 1937: 36; Wood, January 13, 1936). An FBN agent appeared at a New York meeting of the local Federation with two marihuana plants. They were exhibited at a local flower show:

Marihuana Plant
exhibit at
Flower Show
of Katrina Trask Garden Club
Tomorrow, 3 P.M. on at the Casino
This plant is the cause of a dread menace which is being fought by
the State Department of Health.
Public Invited to Show—25¢ (*Saratogian*, 1936: 5)

Other groups such as the YWCA, the National PTA and the National Councils of Catholic Men and Women were all in touch with the Bureau and were made aware of the Bureau's dual aims of "influencing and creating public opinion in favor of the passage of the Uniform Narcotic Drug Act and awakening the parents of the country to the increasing danger of the use of marihuana. . ." (Anslinger, March 28, 1935).

However, arousing public opinion alone was not the ultimate goal of the campaign. The FBN was interested in the enactment of the Uniform Act along with prohibitory marihuana legislation in all the states.

By early 1935, only 10 states had adopted the Uniform Act. And, three of these states had not included marihuana (Anslinger, March 1, 1935). The Bureau embarked upon its marihuana strategy in 1935, the turning point in state enactment. Whether or not public interest actually existed, public opinion-makers influenced legislative opinion and created a "felt need" for legislation.

Within the next year, 18 more states adopted the Act and every one of them which did not have previous legislation included marihuana (Anslinger, January 13, 1936; WCTU, 1937: 75).

ENACTMENT OF THE MARIHUANA TAX ACT

Despite the public opinion campaign conducted in the early 1930's the general public was largely unaware of the drug, its use, or its alleged effects; only regional interest was aroused.

A change seems to have occurred after 1935. The increased national awareness played a significant role in the decision of the Treasury Department to seek federal legislation. On April 14, 1937, the "Secretary of the Treasury, on behalf of the Commissioner of Narcotics," submitted the "administration proposal to Congress to impose an excise and transfer tax on dealings in marihuana" (Schaller, 1970: 70).

The scheme of the Marihuana Tax Act was threefold: a requirement that all manufacturers, importers, dealers, and practitioners register and pay a special occupational tax; a requirement that all transactions be accomplished through use of written order forms; and the imposition of a tax on all transfers in the amount of \$1 per ounce for transfer to registered persons and a prohibitive \$100 per ounce for transfers to unregistered persons.

The key departure of the marihuana tax scheme from that of the Harrison Act is the notion of the prohibitive tax. Under the Harrison Act, a person

not required to register, that is, a non-medical user, could not legitimately buy or possess narcotics. To the dissenters in the Supreme Court decisions upholding the Act, this clearly demonstrated that Congress' motive was to prohibit conduct rather than to raise revenue.

The seemingly bizarre legal formulation of this tax measure was precipitated by the recognized need for the Federal Government to take action forbidden to it under prevailing constitutional doctrine.

Hearings on the proposed marihuana taxation were held before the House Ways and Means Committee. During five mornings of testimony by FBN officials, government witnesses, and industry representatives, the Bureau presented the following four-fold argument: (1) marihuana was a disastrous drug; (2) its use was increasing alarmingly and had generated public hysteria; (3) state legislation was incapable of meeting the threat posed by the drug, thus, federal action was required; and (4) the government might best act through separate legislation rather than through an amendment to the Harrison Act.

No definite scientific study of the effects of marihuana were presented to Congress to substantiate the position that marihuana was a dangerous drug. No synthesis of available scientific information was submitted nor was there any statement by the Public Health Service. Neither of the government's own public health experts, Assistant Surgeon General, Dr. Walter Treadway, and Dr. Lawrence Kolb, testified, nor did Drs. Walter Bromberg or J. F. Siler who had recently published scientific articles on the effects of cannabis in humans (Siler, et. al., 1933: 269-280; Bromberg, 1934).

Instead, the scientific aspects were presented by a law enforcement agency, the FBN:

Despite the fact that medical men and scientists have disagreed upon the properties of marihuana, and some are inclined to minimize the harmfulness of this drug, the records offer ample evidence that it has a disastrous effect upon many of its users. Recently we have received many reports showing crimes of violence committed by persons while under the influence of marihuana.

The deleterious, even vicious, qualities of the drug render it highly dangerous to the mind and body upon which it operates to destroy the will, cause one to lose the power of connected thought, producing imaginary delectable situations and gradually weakening the physical powers. Its use frequently leads to insanity.

I have a statement here, giving an outline of cases reported to the Bureau or in the press, wherein the use of marihuana is connected with revolting crimes (U.S. Congress, 1937: 30).

Instead of having one of the few researchers who had done any significant research into the effects of cannabis on humans, the Bureau chose a

The second component of the Bureau's case was the contention that marihuana use had spread alarmingly in recent years, provoking a public outcry. To demonstrate this, the Bureau submitted, for the record, the Gomila article cited earlier, and a 1936 letter from the city editor of the *Alamoosa Daily Courier* (U.S. Congress, 1937: 32-37). The letter described an attack by a Mexican-American, allegedly under the influence of marihuana, on a girl of his region:

The third component of the Bureau's case was that even though every state now had marihuana legislation, local authorities could not cope with the marihuana menace. To support this proposition editorial pleas from the Washington newspapers were offered along with Bureau testimony that officials of several states had requested federal help.

You say the states have asked you to do that. I presume is because of the freedom of interstate traffic that the states require the legislation.

[W]e have had requests from the states to step in because they claimed it was not growing in that state, but at it was coming in from another state (U.S. Congress, 37: 16).

The congressmen and senators participating in the hearings accepted the Bureau's argument. In fact, Senator Brown, Chairman of the subcommittee which considered the legislation in the Senate, and Chairman Doughton of the Ways and Means committee, had been thoroughly briefed by the Bureau in advance of the hearings. There was no robbing of the Government witnesses. In fact, the Government made its case in the House in one session, and the next three sessions were devoted to countering the technical objections of the oilseed, birdseed, and hemp industries (U.S. Congress, 1937: 59-65, 67-86).

Dr. Woodward's most pointed attack was directed against the assumption that federal legislation was needed to control the marihuana habit. He argued that existing state legislation was more than sufficient if properly enforced and that if lack of coordination was the problem, that was the FBN's fault.

If there is at the present time any weakness in our state laws relating to cannabis or to marihuana, a fair share of the blame, if not all of it, rests on the Secretary of the Treasury and his assistants who have had this duty imposed upon them for 6 and more years (U.S. Congress, 1937: 93).

Finally, Dr. Woodward wondered why, if federal legislation was considered necessary, the Congress did not simply amend the Harrison Act. To the Bureau's argument that such a course would be unconstitutional, he inquired how Treasury's counsel could argue that the present bill was constitutional since the technique was identical. Dr. Woodward's own view was that the amendment of the Harrison Act would be constitutional and that such a course would dispel the professional objections which he raised (U.S. Congress, 1937:97).

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not even thank him for his testimony (U.S. Congress, 1937: 121). When the Senate Finance Committee conducted hearings on the bill, now styled H.R. 6906, two months later, Dr. Woodward submitted instead a short letter which stated the AMA's reasons for opposing the bill (U.S. Congress, 1937: 33-34).

Both Committees reported the bill favorably despite Woodward's objections. The Ways and Means Report stated:

Under the influence of this drug the will is destroyed and all power of directing and controlling thought is lost. Inhibitions are released. As a result of these effects, it appeared from testimony produced at the hearings that many violent crimes have been and are being committed by persons under the influence of the drug. Not only is marihuana used by hardened criminals to steel them to commit violent crimes, but it is also being placed in the hands of high-school children in the form of marihuana cigarettes by unscrupulous peddlers. Cases were cited at the hearings of school children who have been driven to crime and insanity through the use of the drug. Its continued use results many times in impotency and insanity (U.S. Congress, 1937: 1-2).

The Marihuana Tax Act passed the House of Representatives very late in the afternoon of a long session on June 14, 1937; the only opposition came from congressmen who had no idea what marihuana was and desired further information before voting (*Congressional Record*, 1937: 5575, 5689). Instead of a detailed analysis they received a statement of one of the members of the Ways and Means Committee which repeated uncritically the lurid criminal acts attributed to marihuana users at the hearings. After less than two pages of debate, the Act passed without a roll call (*Congressional Record*, 1937: 5575).

TIGHTENING THE LAW

After the passage of the Marihuana Tax Act, the FBN began with a four-pronged enforcement policy:

1. Control of cultivation of the plant for legitimate purposes and eradication of wild growth;
2. Pacification of marihuana-sensationalism in the press;
3. Education of the federal judiciary toward strict application of the law; and
4. Allocation of federal enforcement resources toward major trafficking rather than petty possession offenses.

The scope of the plant's growth, the transportability of the seeds, the dormancy of the seeds, and the lack of a highly efficient herbicide militated against a comprehensive eradication program. The cost of such a program would have been substan-

tial even if success were assured. No active effort was undertaken to conduct an acre-by-acre survey of the United States.

The eradication "program" became simply a matter of reaction to routine information—letter from farmers who had identified the plant and discoveries of acreage by law enforcement agents.

As the Bureau's interest in marihuana subsided during the 1940's, so did the effort to eradicate the wild growth. In fact, the Federal Government encouraged the cultivation of hemp during the war even though an inactive strain had not been developed, because sources of sisal rope had been severed by Japan's occupation of the Philippines. All over the United States, the weed remained plentiful and largely undetected.

After passage of the Act, Commissioner Anslinger directed his agents to discourage local officials from playing up any alleged involvement of marihuana with crime to the press. On April 11, 1938 the Commissioner told his New York District Supervisor that:

Our present policy is to discourage undue emphasis on marihuana for the reason that in some sections of the country recently press reports have been so exaggerated that interest in the subject has become almost hysterical and we are therefore trying to mold public opinion along more conservative and saner lines (Anslinger, April 11 1938).

Immediately following passage of the Act, the FBN also directed an "educational" effort toward the federal judiciary to emphasize the need for severe sentences for marihuana offenders. The Bureau also concentrated on the stifling of suppliers large interstate traffickers, and smugglers. Small possession cases were to be left to local authorities.

Several factors, however, served to frustrate this policy. First, marihuana traffic was highly disorganized and there was no national or regional network as such (New York City, 1945). Second, use was still concentrated geographically and socio-economically and was not a major enterprise. Finally, during the war years, the Bureau abandoned responsibility for most marihuana law enforcement to the states, where the disorganized traffic and regional use could be most effectively controlled. The FBN chose instead to concentrate on the opiates.

After the relative quiet of the war years there was apparently a significant increase in narcotic drug abuse in the late 1940's and the public began to be concerned with the spread of narcotic addiction, particularly among young persons. Congressional furor was aroused by the assertion that the use of marihuana inevitably led to the use of these harder drugs, particularly heroin.

The new legislation came in two waves. In 1951, Congress passed the Boggs Act (Boggs Act, November 2, 1951: 767) which increased penalties for all drug violators. For the first time in federal drug legislation marihuana and the narcotic drugs were lumped together, since the Act provided uniform penalties for the Narcotic Drugs Import and Export Act (Boggs Act, November 2, 1951: 767) and the Marihuana Tax Act (21 USC 1964). The states followed the federal lead. Then, in 1956, Congress passed the Narcotic Control Act, escalating the penalties still further. Once again the states responded in kind.

The hearings before the Subcommittee of the House Ways and Means Committee and the floor debate indicate that the Boggs Act was motivated by a perceived increase in narcotic use in the period 1948 to 1951 (Kefauver Committee Hearings, 1951: 240-241; *New York Times*, 1951).

Representative Boggs, speaking during the Congressional debate on his bill, enunciated a concern which was reflected in many other quarters. After noting that there had been a 24% increase in arrests for narcotic violations between 1949 and 1950 and a 70% increase between 1948 and 1950, Representative Boggs stated:

The most shocking part about these figures is the fact that there has been an alarming increase in drug addiction among younger persons. In the first six months of 1948, the average age of addicted persons committed . . . at Lexington, Kentucky, was 37.5 years. Only three patients were under the age of 21. During the first six months of 1950, only four years later, the average had dropped to 26.7 years and 766 patients were under the age of 21. . . (*Congressional Record*, 1951: 8197).

Representative Boggs and others supported the mandatory minimum sentences for drug peddlers because they felt that some federal judges had been lax in enforcing the narcotic laws (*Congressional Record*, 1951: 8197, 8207, 8211). Public opinion was overwhelming that harsh sentences, including the death penalty for peddling narcotics to minors, would strangle the drug monster then stalking the American youth (Kefauver Committee Hearings, 1951: 430-431).

The Boggs Act was directed in large part at the federal judiciary since a key provision removed judicial discretion in sentencing by providing that upon conviction for a second or subsequent offense the imposition or execution of the sentence could not be suspended nor probation granted.

There had been no concerted lobbying effort by the judicial community during the legislative process; however, James V. Bennett, Director of the U.S. Bureau of Prisons, aroused the judges in the Fifth U.S. Circuit District into eventually rec-

ommending the amendment of the law to remove provisions for mandatory minimum sentences (*New Orleans Statesman*, May 28, 1954; *New Orleans Times-Picayune*, May 28, 1954).

Even while the Boggs Act was still pending in Congress, the Bureau of Narcotics encouraged the states to modify their existing narcotic and marihuana legislation to enact "penalties similar to those provided in the Boggs Bill [which] would be of material assistance in the fight against the narcotic traffic" (Federal Bureau of Narcotics, 1950: 6).

Seventeen states and the territory of Alaska responded by passing "little Boggs Acts" by 1953 and 11 other states increased their penalties by 1956. Two of the latter group, Ohio and Louisiana, enacted penalty provisions which were substantially more severe than those passed previously in any jurisdiction (Federal Bureau of Narcotics, 1956: 28).

The Ohio law, approved June 16, 1955, provided a 20 to 40 year sentence for the sale of narcotic drugs. The Louisiana measure, adopted the following year, provided severe prison sentences without parole, probation, or suspension for the illegal sale, possession, or administration of a narcotic drug. The sentences ranged from a five-year minimum to a 99-year maximum (Federal Bureau of Narcotics, 1951: 8).

Underlying the inclusion of marihuana in the scheme of increased penalties was the progression theory. In the Boggs hearings many witnesses testified to the link between marihuana use and ultimate heroin addiction. Commissioner Anslinger, for example, testified:

The danger is this: Over 50 percent of these young addicts started on marihuana smoking. They started there and graduated to heroin; they took the needle when the thrill of marihuana was gone (Boggs Act Hearings, 1951: 206).

Representative Boggs himself summed up the stepping-stone thesis in House floor debate:

Our younger people usually start on the road which leads to drug addiction by smoking marihuana. They then graduate into narcotic drugs—cocaine, morphine, and heroin. When these younger persons become addicted to the drugs, heroin, for example, which costs from \$8 to \$15 per day, they very often must embark on careers of crime . . . and prostitution . . . in order to buy the supply which they need (*Congressional Record*, 1951: 8197-8198).

The stepping-stone theory thus supplanted the older hypotheses which had linked marihuana to addiction, insanity and violent crime.

In a paper filed as an exhibit to the hearings on the Boggs Act, Dr. Harris Isbell, Director of Research at the Public Health Service Hospital in

Lexington, Kentucky, stated that marihuana was not physically addictive, although he paid lip service to the psychological dependence hypothesis (Boggs Act Hearings, 1951: 147-148).

Acknowledging the possibility of "temporary psychosis" in "predisposed individuals," Isbell otherwise disputed the crime and insanity thesis. Before the Kefauver Committee in the Senate he testified that:

[M]arihuana smokers generally are mildly intoxicated, giggle, laugh, bother no one, and have a good time. They do not stagger or fall, and ordinarily will not attempt to harm anyone.

It has not been proved that smoking marihuana leads to crimes of violence or to crimes of a sexual nature. Smoking marihuana has no unpleasant after-effects, no dependence is developed on the drug, and the practice can easily be stopped at any time. In fact, it is probably easier to stop smoking marihuana cigarettes than tobacco cigarettes (Kefauver Committee Hearings, 1951: 119).

Some observers felt that the narcotics problem had disappeared almost entirely from the national scene after the Boggs Act was passed. Nevertheless, state and federal law enforcement authorities, armed with data suggesting that the strengthening of the drug laws had at least halted the increase in drug use, pressed for further increases in penalties in order to root out the drug menace entirely (Federal Bureau of Narcotics, 1956: 28). Without extended debate or widened public interest, Congress passed the Narcotic Control Drug Act in 1956 (Daniel Committee Hearings, 1955: 57).

There was less attention paid to marihuana during Congressional debate in 1956 than had been the case in 1951. But, the established precedent of classifying marihuana with hard narcotics continued and resulted in a proliferation of marihuana offenses and a further increase in penalties based on the theory that the end of the American narcotics experience could thereby be assured.

However, efficacy of still higher penalties was not uniformly accepted among law enforcement officials; the Deputy Commissioner of the FBN suggested that more severe penalties might press grand juries not to indict and the petty juries not to convict in drug cases. Others rejected this view and felt strongly that more severe penalties were imperative if society was to be rid of its present peddlers and if new entrants into the narcotics business were to be deterred (Good, July 31, 1954).

Among congressmen considering the Bill, there was no dissent from the proposition that harsher penalties were the means to eliminate the illicit use and sale of all drugs (*Congressional Record*, 1956: 10689).

In addition to facilitating enforcement of narcotics laws through a number of ancillary provi-

sions, the Narcotics Control Act of 1956 established the following penalties:

	Possession	Minimum sentence
First offense.....		2 years
Second offense.....		5 years
Third and subsequent offense.....		10 years
Fine.....		\$20,000
	Sale	Minimum sentence
First offense.....		5 years
Second offense.....		10 years
Sale to minor by adult.....		10 years

Parole or probation were made unavailable to all except first offenders in the possession category (26 USC, 1964).

The Act also created a new offense by prohibiting illegal importation of marihuana. Simple possession was by statute sufficient to convict the possessor of knowingly receiving illegally imported marihuana (21 USC, 1964).

Few legislators recognized that marihuana was in any way different from the physically addictive narcotics. The House Subcommittee on Narcotics, which produced what became the essentials of the 1956 Act, had inserted a footnote to the major heading "Narcotics" which stated in fine print that the term narcotics included marihuana (U.S. Code Cong. and Ad. News, 1956: 3294). Only once during the Congressional debates on the House and Senate versions of the Bill was the subject of marihuana as a separate substance even raised.

Moreover, in a statement reflecting the general acceptance of the stepping-stone concept, Senator Daniel, Chairman of the Senate Subcommittee that investigated the drug problem, described marihuana:

That is a drug which starts most addicts in the use of drugs. Marihuana, in itself a dangerous drug, can lead to some of the worst crimes committed by those who are addicted to the habit. Evidently, its use leads to the heroin habit and then to the final destruction of the persons addicted (U.S. Code Cong. & Ad. News, 1956: 3294).

By the fifties, marihuana had been fully integrated into the narcotics legislation of every state in the Union and of the national government. Possession of the drug, even for one's own use, was a felony everywhere, and the user was subject to long periods of incarceration as punishment for his indulgence.

1960-1970: NEW LEGISLATIVE APPROACH

From the mid-fifties to the mid-sixties, federal activity in marihuana and narcotic law enforcement was relatively stable. The number of offenders apprehended and convicted in both areas remained constant (U.S. Courts, 1956-1964).

However, in the early and mid-sixties a new phenomenon was occurring. Drug abuse began to spread. It no longer confined itself to the ghettos and certain socioeconomic and ethnic groups; the new users were the sons and daughters of the middle class. It began striking home at the average American and became a national, major issue of concern (Rosevear, 1967: 117-131; U.S. Bureau of Narcotics, 1966: 40).

The new middle class use of marihuana induced significant medical inquiry into the nature of the drug and spurred a new legislative approach. One commentator stated:

Nobody cared when it was a ghetto problem. Marihuana—well, it was used by jazz musicians or the lower class, so you didn't care if they got 2 to 20 years. But when a nice, middle-class girl or boy in college gets busted for the same thing, then the whole community sits up and takes notice. And that's the name of the game today. The problem has begun to come home to roost—in all strata of society, in suburbia, in middle-class homes, in the colleges. Suddenly, the punitive, vindictive approach was touching all classes of society. And now the most exciting thing that's really happening is the change in attitude by the people. Now we have a willingness to examine the problem as to whether it's an experimentation, or an illness rather than 'an evil' (*New York Times*, Feb. 5, 1970: 14).

Congress initially acted by passage of the Drug Abuse Control Amendments of 1965 (Public Law 89-74, 1965). This legislation established a Bureau of Drug Abuse Control within the Food and Drug Administration and created criminal, misdemeanor penalties for the illegal manufacture and sale of depressant and stimulant drugs and hallucinogens.

The dramatic increase in the use of marihuana and other drugs during the latter 1960's was a matter of high public visibility. In response, President Johnson offered Reorganization Plan No. 1 of 1968 (H. Doc. No. 249, 1968). This reorganization was effective on April 8, 1968 and placed the Federal Bureau of Narcotics (of Treasury) and the Bureau of Drug Abuse Control (of FDA) in the Department of Justice and designated it the Bureau of Narcotics and Dangerous Drugs.

What had been obvious with the passage of the 1965 Drug Amendments became glaring with this reorganization, that is, the tremendous disparity in penalties for violations involving dangerous drugs as opposed to narcotics and marihuana. As a result of increased medical and scientific inquiry, LSD and several other drugs were acknowledged as being more powerful hallucinogens than marihuana.

To compound the disparity, tetrahydrocannabinol (THC), the major active ingredient in marihuana, was placed under controls whereby

someone in unauthorized possession of THC was subject to no penalty, but someone in possession of marihuana was subject to a minimum mandatory penalty of two years imprisonment (*Federal Register*, 1968: 14880). Congress then changed the possession penalty, under the Drug Abuse Control Amendments, to a misdemeanor and increased the penalties for sale or manufacture of LSD and the other controlled drugs to up to five years (Public Law 90-639, 1968).

Nevertheless, a great disparity regarding penalties for these substances still existed. The atmosphere for change was ripe. Adding pressure to the situation was the criminalization of increasing numbers of young persons whose sole crime was possession of marihuana for their own use.

In late 1968, the newly formed Bureau of Narcotics and Dangerous Drugs drafted legislation which would nationalize control of the drugs under the Bureau's jurisdiction. The proposed law vested on the commerce clause rather than on the taxing powers.

The change in authority was prophetic because the Leary decision, which was handed down by the Supreme Court on May 19, 1969, held that the order form procedure necessary to meet the requirements of the Marihuana Tax Laws, forced an individual to incriminate himself in violation of the Fifth Amendment (*Leary v. U.S.*, 1969). Ostensibly, this decision left BNDD with no marihuana possession law and was another factor in evidence of the need for a revision of the law.

This new bill, H.R. 13742, covered the regulation of narcotic drugs, "dangerous drugs" and marihuana. It was transmitted by President Nixon on July 14, 1969.

Emerging from this legislation was an overall balanced scheme of criminal penalties. Minimum mandatory offenses were essentially abolished and the offense of possession of a controlled substance for one's own use was made a misdemeanor. Further, in first-offense, simple possession cases, the court was given the discretion to place a defendant on probation, for up to one year. If, at the end of the probation period, the defendant had not violated any of the conditions of the probation, his conviction could be expunged.

The same misdemeanor penalty and opportunity for first offender treatment was provided for the distribution of a small amount of marihuana for either: (1) no remuneration; or (2) the cost of the drug.

This provision was included in recognition of the large number of such transactions which take place among youth and in recognition of a phenomenon which surfaced as a substantial challenge to

the traditional picture of the national marihuana trade. Legislators had formerly stereotyped the "seller" as the vicious criminal pushing his wares for high profit and felt that extraordinarily harsh penalties were justified for sellers (Narcotics Legislation Hearings, 1969: 4).

But several studies showed that the structure of marihuana traffic bore little or no relation to the traditional stereotype. One survey of 204 users found that 44% had sold to friends at least once. Many casual users sold to leave themselves enough profit to cover the amount of their own use (Goode, 1969: 7). Under the new Act, they would not be punished as distributors.

* The new legislation also made a distinction between marihuana and narcotic drugs. Marihuana was placed in a category with hallucinogenic drugs and their difference from narcotics was emphasized by the difference in penalties as follows:

	Maximum sentences			
	Marihuana and other non-narcotic controlled substances		Narcotics	
	1st offense	2nd offense	1st offense	2nd offense
Simple possession:*				
Years.....	1	2	1	2
Dollars.....	5,000	10,000	5,000	10,000
Unlawful distribution, possession with intent to distribute, manufacture, importation or exportation:				
Years.....	5	10	15	30
Dollars.....	15,000	30,000	25,000	50,000

*Distribution of small amounts of marihuana for no remuneration is treated the same as simple possession.

The bill was passed by Congress (and signed into law by President Nixon) on October 27, 1970, as the Comprehensive Drug Abuse Prevention and Control Act of 1970.

In conjunction with this new federal law, a uniform state act was drafted by the National Conference of Commissioners on Uniform State Laws and approved by them as the Uniform Controlled Substances Act at their annual conference August 1-7, 1970.

The following statement in the preface of the Act explains its purpose:

This Uniform Act was drafted to achieve uniformity between the laws of the several States and those of the Federal Government. It has been designed to complement the new federal narcotic and dangerous drug legislation and provide and interlocking trellis of Federal and state

law to enable government at all levels to control more effectively the drug abuse problem.

The Uniform Act does not recommend penalties except with respect to possession for one's own use. For such offenses, the Conference recommended that it be treated as a misdemeanor.

To date, 26 states and three territories have adopted the Act in its entirety or in a varied form. Currently, 10 to 15 states are considering it.

The most recent chapter in the legal history of marihuana appears in other pages of this Appendix. The appointment of the National Commission on Marihuana and Drug Abuse and the issuance of its Report are themselves significant events from an historical point of view.

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History of Alcohol Prohibition*

In 1920, the national policy of Prohibition began. The 18th Amendment to the Constitution had been officially ratified:

It sought, by law, to make the whole Nation into enforced teetotalers and to put an end to all evils associated with drinking. It sought to eradicate a taste deeply rooted in the habits and customs of a large part of the population through outlawing the business that ministered to its satisfaction (Hu, 1950: 48).

1650-1750: THE FIRST HUNDRED YEARS

In fact, it started earlier. "Ministers shall not give themselves to excess in drinkinge, or riott, or spending their tyme idellye day or night," ruled the Virginia Colonial Assembly in 1629 (Cherrington, 1920: 16).

Massachusetts ordered that no person shall remain in any tavern "longer than necessary occasions" in 1637, while Plymouth Colony in 1633 prohibited the sale of spirits "more than 2 pence worth to anyone but strangers just arrived" (Cherrington, 1920: 18).

This sampling of the earliest colonial laws is representative of the attempt, continued since those times, to control excessive consumption. Excessive drinking, it was considered, produced behavior unseemly in some, such as ministers, and dangerous in others, such as Indians.

But drinking *per se* was not frowned upon. Indeed, when the Puritans set sail to Massachusetts, they had taken care to carry with them 42 tons of beer (in contrast with 14 tons of water) and 10,000 gallons of wine (Lee, 1963: 15).

The regulation of liquor consumption was a matter of considerable concern in certain colonies. Thus, for a time, Massachusetts went so far as to prohibit the drinking of healths in 1638 (Lee, 1963: 19). The law was soon abandoned for reasons

*This section is based in large part on a paper prepared for the Commission by Jane Lang McGrew, an attorney from Washington, D.C.

obvious, albeit unrecorded. It rapidly became clear, however, that liquor laws could do more and perhaps better, than control consumption: they could provide a source of revenue. By the turn of the 18th century, the regulatory impulse was concentrated on fines, excise taxes and license fees.

Fines were imposed for drunken behavior, unlawful sales to a drunken tippler or to Indians, and for selling without a license. Court records indicate that these laws were enforced with reasonable regularity (Krout 1967: 29-30). Licenses often carried their own fees, and excise taxes were levied upon distilled spirits as well as beer and fermented drink in many cases.

Until the 18th century, however, there was no attempt to prohibit the manufacture, importation, sale, or consumption of alcoholic beverages. Quite the contrary, at least one individual—in some cases a reluctant individual—was required in many towns to run the local inn or public house for visitors and travelers.

Although colonial statutes made it clear that tipplers and idlers were unwelcome, the diary of a colonial traveler, Sarah Kemble Knight, suggests that such laws were unsuccessful in containing the ribaldry which took place in many such houses. Madam Knight complained:

I could get no sleep, because of the Clamor of some of the Town Tope-ers in the next room. . . . I heartily fretted & wish't 'am tongue tyed. . . . They kept calling for Tother Gill, Wch while they were swallowing, was some Intermission, But presently, like Oyle to fire, encreased the flame (Miller, Johnson, eds., 1963: 430-431).

Persons other than Madam Knight were to become more outspoken about their concern for the use of spirits. The most significant premonition was the Colony of Georgia's action in 1735 when the first prohibitory statute against the importation of "ardent spirits" was enacted. At the same time, however, the consumption of beer was encouraged (Grant, 1932: 1). The time for temperance had not yet arrived.

1750-1825: TEMPERANCE STIRRINGS

As the evils of intemperance began to attract the attention of the ministry, John Wesley denounced the sin of distilling and declared for its prohibition in 1773 (Cherrington, 1920: 37-38).

On his heels came the publication of a pamphlet entitled "The Mighty Destroyer Displayed and Some Account of the Dreadful Havoc Made by the Mistaken Use, As Well As the Abuse, of Distilled Spiritous Liquors," by Anthony Benezet, a member of the Society of Friends, advising against the use of any drink "which is liable to steal away a man's senses and render him foolish,

irascible, uncontrollable, and dangerous" (Cherrington, 1920: 38).

Nevertheless, typical of the century's ambivalence, the first master at Harvard was fired when it was found that Harvard students had been left "wanting beer betwixt brewings a week and a week and a half together" (Lee, 1963: 16).

Concern for the effect of liquor upon the public weal was expressed by John Adams who noted in his diary on February 29, 1760, that the taverns were "becoming the eternal haunt of loose, disorderly people . . ." (Cherrington, 1920: 37). Worst of all he continued:

. . . These houses are become the nurseries of our legislators. An artful man, who has neither sense nor sentiments, may, by gaining a little sway among the rabble of the town, multiply taverns and dram shops and thereby secure the votes of taverner and retailer and of all; and the multiplication of taverns will make many, who may be induced to flip and rum, to vote for any man whatever (Dobyns, 1940: 215).

The health argument in behalf of temperance was first made by Nathaniel Ames, in the 1752 edition of his *Almanack*, who wrote that

Strong Waters were formerly used only by the Direction of Physicians; but now *Mechanicks* and low-l'd *Labourers* drink Rum like Fountain-Water, and they can infinitely better endure it than the idle, unactive and sedentary Part of Mankind, but DEATH is in the bottom of the cup of every one (Lee, 1963: 22).

Dr. Benjamin Rush shared his concern, publishing in 1785 his now famous "Inquiry into the Effects of Ardent Spirits Upon the Human Body and Mind." Enumerating the diseases of the body and mind which plague the drinker of distilled liquors, Dr. Rush outlined the symptoms, including "unusual garrulity, unusual silence, captiousness . . . an insipid simpering . . . profane swearing . . . certain immodest actions" and "certain extravagant acts which indicate a temporary fit of madness" (Rush, 1943: 323, 325-326).

Although the rumblings of the temperance movement were thus perceptible in the late 18th century, there is no evidence that its effects were felt. In 1766, it is recorded that the repeal of the Stamp Act was greeted in Providence, Rhode Island with "32 of the most loyal, patriotic and constitutional toasts" (Lee, 1963: 18). Notwithstanding this evidence of devotion to His Majesty, it was often thereafter the tavern which provided the meeting places for the most defiant revolutionaries.

Subsequently, when the colonial period disappeared into the post-Revolutionary era, Alexander Hamilton adopted the idea earlier effected by the individual colonies, to tax distilled liquors for revenue purposes. In 1791, the tax was enacted as part

of the Revenue Act. The following year, the Second Congress of the United States added license fees for distilleries and taxes on liquors distilled from imported materials.

Incensed by this federal action, farmers in Western Pennsylvania mobbed revenue collectors and armed to resist this intrusion by the new Federal Government. It required 15,000 militia to bring the so-called Whiskey Rebellion to an end (Peterson, 1969: 119-120). Such was the first indication that the liquor industry in the United States would be a force with which the government would have to reckon.

Toward the end of the 18th century, a temperance movement, as such, became discernible. The Methodist Church took a staunch position against the sale or imbibing of ardent spirits "unless in cases of extreme necessity." Five years later, in 1789, even the exception was excised (Cherrington, 1920: 50). A similar platform was adopted by the Presbyterian Synod of Pennsylvania and by the Yearly Meeting of Friends of New England (Cherrington, 1920: 51, 58).

On a non-clerical level, the movement began to organize. Although there is some dispute as to the identity of the original temperance society, it appears that as early as 1778, there was an organization calling itself the Free African Society which excluded men of drinking habits, followed soon thereafter by the Organization of Brethren, and the Litchfield, Connecticut Association of "the most respectable farmers" in Connecticut determined to discourage the use of spirits (Cherrington, 1920: 49, 58).

The turn of the century saw the vitalization of the temperance spirit. Religious leaders, including Cotton Mather, Dr. Lyman Beecher, John Wesley and Reverend Andrew Elliott inveighed against the consumption of liquors. Temperance activity figured prominently in the concerns of the Presbyterian, Methodist, Universalist, Baptist, and Friends churches.

"Had the temperance reform in America awaited for a non-church or a non-Christian leadership," theorizes one historian,

. . . the temperance revolution of the past century would yet remain to be accomplished. . . . Every successful temperance movement of the last century has been merely the instrument—the machinery and equipment—through which the fundamental principles of the Christian religion have expressed themselves in terms of life and action (Cherrington, 1920: 92).

Whatever the Christian input, however, it is also apparent that a desire to reform was aroused in the country, very much like that which was to be experienced a century later during the Progressive Movement. Thus, the Massachusetts Society for

the Suppression of Intemperance of 1813, damned not only rum, but all of the "kindred vices, profaneness and gambling" and beseeched members to "discourage . . . by . . . example and influence, every kind of . . . immorality" (Lee, 1963: 23). Mingling with the potential temperance leaders during this period were the future spokesmen of abolitionism, feminism, and utopianism.

In the meantime, the industry was able to report triumphantly that the federal taxes on distilling and importing spirits were repealed in 1802. From 1813 until 1817, the retailers' and distillers' licenses bore a federal tax, but beginning in 1818 the industry enjoyed a tax-free era which was to last until 1862. Thomas Jefferson rejoiced—"as a moralist"—explaining that:

It is an error to view a tax on that liquor as merely a tax on the rich. It is a prohibition of its use in the middling class of our citizens, and a condemnation of them to the poison of whisky, which is desolating their houses. No nation is drunken where wine is cheap; and none sober, where the only antidote is the bane of whisky (Peterson, 1969: 122-123).

Future prohibitionists would likewise castigate the government for drawing its revenues from the liquor industry and participating in the profits of evil thereby.

1825-1870: THE PLEDGE

Temperance was not always equated with teetotalism. Beer and usually wine were initially exempt from denunciation in both sermons and treatises. There developed in the mid-19th century, however, the conviction that all brews, be they "ardent spirits," beer, ale, or wine, were anathema.

The new temper of the movement was epitomized by the travels of Father Theobald Matthew of Ireland who toured the United States from 1849 to 1851, administering the pledge of total abstinence to some 600,000 persons in 25 states. A White House dinner and a Senate reception stamped official approval upon his sojourns (Furnas, 1968: 80). Thus did temperance drift into a new phase, with its ardent spokesman, Congressman Gerrit Smith, crying that:

I would that no person were able to drink intoxicating liquors without immediately becoming a drunkard. For, who, then would . . . drink the poison that always kills, or jump into the fire that always burns? (Furnas, 1968: 15).

It was in this atmosphere that the first prohibition experiments were undertaken on a statewide basis. "Until the liquor traffic is abolished . . . all efforts at moral reform must

languish," judged one of the earliest prohibitionists.

In "Grappling with the Monster," T. S. Arthur stated, "The CURSE is upon us, and there is but one CURE: Total Abstinence, by the help of God, for the Individual, and *Prohibition* for the State" (Furnas, 1968: 15).

In 1847, the first such cure was enacted for the state of Maine (Cherrington, 1920: 134). (Actually, the first Prohibition law went into effect in 1843 in the territory of Oregon. This was repealed five years later.)

A wave of prohibition statutes followed. Delaware, on the heels of Maine, passed its first prohibition law only to have it declared unconstitutional the following year. Similar laws were enacted in Ohio, Illinois, Rhode Island, Minnesota, Massachusetts, Connecticut, Pennsylvania and New York during the next few years. They met with varying fates, including veto by the governors, repeal by the legislatures and invalidation by the state supreme courts.

The evaluations by several historians of these early trials were to be heard again in the 20th century: the enactments lacked support from a large portion of the population, making enforcement exceedingly difficult. Ultimately, all but one of the states repealed the prohibition statutes of the 19th century (Grant, 1932: 5; Peterson, 1969: 123).

Notwithstanding this record, prohibitionists took heart. "This thing is of God," cried Lyman Beecher from the pulpit. "That glorious Maine law was a square and grand blow right between the horns of the Devil" (Furnas, 1968: 167). Temperance societies, established in all but three states by 1832 and destined to proliferate, began to consolidate as well.

The American Temperance Society, later to become the American Temperance Union, was organized in 1826. It quickly begat auxiliaries, so that by 1835, 8,000 locals existed (Cherrington, 1920: 92-93).

As the years passed, they witnessed the founding of more temperance organizations of a general and national character than during any other period in the United States' history. The Washingtonian movement, organized in the City of Baltimore in 1840, was followed by the Martha Washington movement in 1841.

The Sons of Temperance came into existence in 1842, at the same time the Order of Rechabites was organized, and the Congressional Temperance Society of 1833 was revived on the basis of total abstinence. They took heart at their early state successes and fought against the defeats of repeal.

In the meantime, however, the United States government, which had heaped honors upon Father Matthew, concluded a treaty with King Kamehameha III of Hawaii in 1850 permitting the introduction and sale of liquor on his island.

As further evidence of the national dichotomy, Chicagoans in the 1850's fought virulently against the enforcement of Sunday closing laws. To protest, an armed mob burst into the business district of the city, to be met by police. Fortunately, the mob was dispersed before the mayor found it necessary to use the cannon he had hurriedly planted around City Hall (Peterson, 1969: 120).

It was the time when patent medicines, 40 proof and more, began to develop their clientele. And although the Demon Rum might threaten their health and life, Lydia Pinkham's Compound offered a cure for any and all ails and aches.

By the time of the Civil War, both the assimilative and coercive traditions of the temperance movement had crystallized: that is, temperance proponents were determined to save the weak and to destroy the recalcitrant (Gusfield, 1963: 69-70). The hardening of positions was accompanied by the development of political consciousness in the movement and recognition of political objectives. These processes were only temporarily blunted by the Civil War in the 1860's and the diversion of interest to the abolitionist cause.

Part of the heritage of the Civil War was the tax on liquor and beer imposed in 1862. Rates were increased several times between 1863 and 1868, so that the tax imposed at the rate of 20 cents per gallon rose to \$2 per gallon.

An interesting phenomenon was noted by the Federal Government: as the rates increased, the revenue did not. In fact, the number of gallons reported actually declined. As the decade went on, attempts were made to enforce the tax laws and in 1868, \$25,000 was actually appropriated to detect violators. Fraud continued almost unabated. Stockpiling of liquor was popular to hedge against future increases, for they were not applicable to liquor on hand.

The infamous Whiskey Ring was active in these days and was not finally broken up until 1875, when, in a peak of nerve, members established a corruption fund in the District of Columbia to halt the prosecution of 321 persons charged with violations of the revenue laws. Before then, however, Congress apparently had second thoughts about the implications of the revenue collections and reduced the tax from the high of \$2 per gallon to 50 cents in 1869. The happy result was to see a

rise in collections from \$13.5 million in 1868, to \$45 million in 1869, and \$55 million the following year. Taking further precautions, the government stipulated that new stamps be developed to preclude counterfeiting and tampering (History of the Alcohol . . ., 14-20; Cherrington, 1920: 156-162).

Congress did not escape unscathed by criticism and reaction. It came from both sides of the temperance issue. Temperance advocates such as Senator Wilson of Massachusetts and Senator Pomeroy of Kansas decried the fact that federal revenues would be drawn from the liquor industry.

At the same time, however, the industry revolted, leading to mass tax evasion schemes and devices and the organization of their first industry lobby, the United States Brewers Association. The Association rapidly launched a legislative campaign and succeeded in 1863 in reducing the tax rate of beer from \$1 to 60 cents (Cherrington, 1920: 157).

By 1870, the Civil War dust had cleared and the temperance battle lines were drawn, already tested by the skirmishes of the 1840's and 1850's. The most interesting feature of their war strategy was soon to become apparent: women and children were welcomed at the battlements.

1870-1913: TOWARD A NATIONAL CONSCIENCE

A series of "isms" was aroused in this era: feminism, unionism, socialism, and progressivism. Prohibition absorbed elements of them all, and vice versa.

The feminist movement originated early in the 1800's. Until the 1870's, however, feminine involvement in the temperance effort was largely peripheral. The Women's Crusade of 1873 and the organization of the Women's Christian Temperance Union in 1874 marked the formal entrance of women into the temperance movement.

The WCTU was devotedly headed by Frances E. Willard, a lady equally committed to the principle of equality of the sexes. Temperance was to bridge the gap, she believed:

Drink and tobacco are the great separatists [sic] between men and women. Once they used these things together, but woman's evolution has carried her beyond them; man will climb to the same level . . . but meanwhile . . . the fact that he permits himself fleshly indulgence that he would deprecate in her, makes their planes different, giving her an instinct of revulsion (Furnas, 1968: 281).

Although the WCTU was organized initially around the temperance issue, it was not long before Miss Willard's leadership expanded its conscience.

A statement of principles was adopted in its early years:

We believe in a living wage; in an 8-hour day; in courts of conciliation and arbitration, in justice as opposed to greed in gain; in "Peace on Earth and Good Will to Men" (Gusfield, 1963: 76).

Within three years of its inception, the WCTU reported that its concerns included "a better Indian policy" and "wiser civil service reform" (Gusfield, 1963: 77). There were those in the Union who felt that their interests should be limited to temperance. But, forecasting the mood of Progressivism, Miss Willard steered the organization along the broader lines to social reform.

The WCTU was responsible for part of the early campaign to educate the public about temperance. Children were recruited to sing praises of "the true and the brave" who signed the abstinence pledge. They were assisted in this effort by McGuffey's Readers which denounced the licensing of liquor stores and saloons:

Licensed—to do thy neighbor harm,
Licensed—to kindle hate and strife,
Licensed—to nerve the robber's arm,
Licensed—to whet the murderer's knife,
Licensed—like spider for a fly,
To spread thy nets for man, thy prey,
To mock his struggles, crush his soul,
Then cast his worthless form away (Lee, 1963: 34-35).

Whiskey makes "the happy miserable" and impoverishes the rich, the McGuffey books concluded. And the word spread. By 1902, the temperance campaign had permeated the public school systems: every state but Arizona had introduced compulsory temperance education. Their texts teemed with both facts and misinformation such as "Alcohol sometimes causes the coats of the blood vessels to grow thin. They are then liable at any time to cause death by bursting . . ." (Sinclair, 1962: 43).

The WCTU was not carrying the burden of reform alone, however. In 1869, the National Prohibition Party was born. Three years later, the first party ticket was put forth in the presidential campaign of 1872, headed by John Black, who received 5,607 votes for President. Success at the polls ultimately peaked in 1892 when John Dedwell, the Prohibition presidential candidate, received a total of 270,710 votes. Thereafter, its partisans declined in number, having failed to break voters away from their traditional affiliations (Cherrington, 1920: 165-169).

As a rule, the WCTU eschewed partisanship. Their objectives were far broader—and more practical—than those contemplated by the Prohibition Party. Only once it supported the Prohibition Party in the notorious election of 1884.

The election of 1884 carried a variety of implications for future candidates on the temperance issue. In New York City alone, 1,007 primaries and conventions reportedly were held by the various parties. Of these, over 60% took place in saloons (Peterson, 1969: 123), recalling to mind the complaint of John Adams a century before (Cherrington, 1920: 37; Dobyns, 1940: 215). The meeting places were indicative of the fact that at this time neither party could afford to adopt a dry plank in its platform, for New York would be a pivotal state in the race between Republican James G. Blaine and Democrat Grover Cleveland.

Blaine campaigned hard, trying to overcome the defection of several thousand dry Republicans to the Prohibition Party. Speaking in behalf of Blaine at a New York City rally, Presbyterian minister Samuel Burchard denounced the Democrats as the party of "Rum, Romanism, and Rebellion." Needless to say, the Catholic vote, as well as the wet vote, quickly swelled the Democratic totals. Blaine, having thus alienated both wets and dries, lost the state—and the election—by a tiny margin (Furnas, 1968: 273; Lee, 1963: 29-30).

In case the lesson that temperance was an issue to be reckoned with in national politics was lost on the parties after 1884, the events of the decade culminating in the birth of the Anti-Saloon League in 1895, dramatized the point. A second wave of state prohibition laws was experienced between 1880 and 1890. The results of much agitation during those years were less than satisfying to temperance advocates, however; only six states emerged with state-wide prohibition by statute or constitutional amendment. Numerous other states had enacted local option, which permitted towns to go dry if they so chose by referendum. Without state or federal insulation from wet communities, however, the so-called dry towns were scarcely temperance models.

In the wake of these state legislative actions, South Carolina introduced a state dispensary system in order to eliminate the motive of private gain from the liquor business. Political scandals which quickly developed tended to discredit it, however, if indeed it had enjoyed much support from any corner (Cherrington, 1920: 250-251).

With this discomfiting history behind it, the Anti-Saloon League arose to the challenge, while Carrie Nation independently thrust her way into the public eye. The League was to develop the art of lobbying or "pressure politics" to its most dramatic heights. Scarcely more than 10 years after its organization, it was described as "the most dangerous political movement that this country has ever known" by the National Model License League, a wet (and harassed) association. A more

rational viewpoint was expressed by the president of the New York State Brewers Association in 1913:

We are not dealing with a theory which is the delusion of the fanatic alone, but with a real condition which is in the hands of a well organized force, led by aggressive, experienced, and untiring leaders (Odegard, 1928: 23).

The focus of the League's indictments included not simply alcohol, but the saloon itself, as the purveyor of spirits. The myriad League publications denounced the saloon for "annually sending thousands of our youths to destruction, for corrupting politics, dissipating workmen's wages, leading astray 60,000 girls each year into lives of immorality and banishing children from school" (Odegard, 1928: 40-59).

"Liquor is responsible for 19% of the divorces, 25% of the poverty, 25% of the insanity, 37% of the pauperism, 45% of child desertion, and 50% of the crime in this country," the League determined. "And this," it concluded, "is a very conservative estimate" (Odegard, 1928: 60).

League posters appeared everywhere depicting the saloon-keeper as a profiteer who feasted on death and enslavement. Others screamed out the dire consequences of alcohol. "Alcohol inflames the passions, thus making the temptation to sex-sin unusually strong," advertised one (Sinclair, 1962: 51).

It was the League which geared up the campaign, but it was not alone. As the Progressive spirit caught the national interest in the early 19th century, the movement for reform embraced the cause of temperance. The temperance movement assumed an aura of evangelism, combining the concept of America's mission with the vision of Messianism. Through the combination of temperance and progressivism, it was believed that the Kingdom of God could actually come to the United States.

In an article in *Appleton's Magazine* in 1908, the Reverend Charles F. Aked articulated the aspirations of the reformers:

We are spending our lives, many of us, in the effort to make the world a little better and brighter for those that shall come after us. . . . We want to open out life and liberty to all the sons of men. We want to make possible for all of life in the whole, the good and the beautiful . . . and the common sale of intoxicating liquor renders our work a thousand times more difficult . . . (Timberlake, 1963: 34-38).

Others were more mundane. Scientists began accumulating evidence of the effect of quantities of alcohol on the nervous system and general physical condition. The myth that alcohol consumption improved muscular power was exploded. The relationship between mental psychoses and alcohol

was documented, and thus did the condemnation of alcohol as a poison assume scientific support. Finally, in 1915, whiskey and brandy were discreetly removed from the list of authoritative medicinal drugs contained in the United States Pharmacopoeia (Timberlake, 1963: 47).

Who were the people fueling the movement? Largely middle class, rural, Anglo-Saxon and Protestant comprised the temperance movement and they confronted the urban and industrial communities head-on. "The Anglo-Saxon stock is the best improved, hardiest and fittest. . . . [I]f we are to preserve this nation and the Anglo-Saxon type we must abolish [saloons]," proclaimed one temperance publication (Gusfield, 1963: 100). Calling itself "The Protestant church in action" (Sinclair, 1962: 108), the Anti-Saloon League concentrated single-mindedly and evangelically on the cause of temperance and refrained from dabbling in other reforms (Gusfield, 1963: 108).

Nevertheless, the Episcopal and Lutheran churches never aligned themselves with the Anti-Saloon League, while Jewish and Catholic groups generally opposed their objective. The conviction shared by Anti-Saloon Leaguers expressed by Reverend Francis Ascott McBride was: "The League was born of God" (Lee, 1963: 35). Thus, one had to be for or against the movement; there was no half-way commitment.

When the sides were lined up initially, industrialists and union leaders alike preferred to keep God on their side. From the company's point of view, the saloon was often responsible for industrial injuries and absenteeism. Some believed that the drinking man demanded higher wages than his sober counterparts. Furthermore, union locals tended to congregate in saloon meeting halls maintained for that purpose and, it was sometimes suspected, for the plottings of anarchistic conspirators (Furnas, 1968: 310).

Accordingly, it was not long before industry moved from an acquiescent position to an active role in the temperance movement. Various methods were adopted to encourage sobriety, including lectures, literature and job preferences for teetotalers. Businessmen opined that sobriety expanded productivity, increased bank deposits, improved collections and stimulated the retail trade (Timberlake, 1963: 67-79).

At the same time, the prospect of diverting patronage of the liquor industry to other products tantalized some industries. Thus the Welch Grape Juice Company advertised:

Get the Welch Habit—It's one that won't get you! (Timberlake, 1963: 77).

Opinion was not unanimous, of course. Business-

men, including bankers, whose interests were tied to the liquor industry could ill afford to be beneficent toward temperance. Others, including the DuPonts, Rockefellers, Kresges, and Wanamakers spent freely to cover the League's annual campaign costs of \$2.5 million (Odegard, 1928: 126).

As surely as liquor was the enemy of the home, it was also proclaimed the enemy of the working man. "The great sinkhole for the workers' wages is the saloon," wrote the editors of one League publication, *The California Liberator*. "When that abomination is destroyed, labor is freed from its greatest curse" (Odegard, 1928: 53). The logic appealed to the union leadership. According to one official of the American Federation of Labor:

No force in our country has been as effective in the promotion of temperance among working people as the organized labor movement. The labor movement has achieved more for the cause of temperance than all the temperance societies combined . . . (Timberlake, 1963: 83).

Since similar credit has been claimed for the League, the Protestant church, and business interests, it is difficult to apportion the plaudits. Subsequent events suggest that the labor interests failed to live up to this claim, however.

Notwithstanding Terrence V. Powerderly's early speech against "the strong right hand of labor itself . . . that carries with it the rum which drowns reason," his own Knights of Labor repealed their constitutional provision which denied membership to anyone connected with the liquor trade (Timberlake, 1963: 85-86).

As the reports of the National Commission on Enforcement of the Prohibition Laws (known as the "Wickersham Commission") were later to record, it was particularly the workers who resented the paternal legislation which they believed was directed at them and their habits (National Commission on Law Observance, 1931: 345).

In addition, there were those whose livelihoods would be directly affected—indeed, effaced—by the success of the campaign: brewery workers, bartenders, glass workers, waiters, and musicians among others.

Thus, even though the Socialist Party resolved in 1908 that "any excessive indulgence in intoxicating liquors by members of the working class is a serious obstacle to the triumph of our cause since it impairs the vigor of the fighters in political and economic struggle" (Timberlake, 1963: 98), the industrial urban centers of the country continued to harbor and stimulate antagonism towards the temperance movement.

The identification of the saloon and its offerings with the urban, immigrant working class further enraged Prohibitionists. As one sociologist observed, "The saloon appeared as the symbol of

a culture which was alien to the ascetic character of American values . . ." (Gusfield, 1963: 100). Thus, Americanism became a central issue in the temperance movement.

One temperance spokesman, cited in Barker's "The Saloon Problem," vented these sentiments:

The influx of foreigners into our urban centers, many of whom have liquor habits [sic], is a menace to good government. . . . [T]he foreign born population is largely under the social and political control of the saloon. If the cities keep up their rapid growth they will soon have the balance of political power in the nation and become storm centers of political life (Timberlake, 1963: 118).

1913-1933: NATIONAL PROHIBITION— PROLOGUE AND FINISH

The distrust of the immigrant population became more pronounced as the economic, political, and social power of the cities developed. It was given a strong impetus by the anti-German tremors which shook the country in a mood of anticipation before World War I.

The United States Brewers Association misread the prevailing temper and associated itself with the German-American Alliance to oppose the temperance advocates and defend German *kultur* in the United States.

As the United States came closer to war, the antipathy which developed against the Central Powers was directed with equal force against brewers and tipplers (Furnas, 1968: 334-335):

Pro-Germanism is the only froth from the German's beer saloon. Our German Socialist Party and the German-American Alliance are the spawn of the saloon. . . . Prohibition is the infallible submarine chaser (Sinclair, 1962: 122).

The war gave the prohibition cause new ammunition. Literature depicted brewers and licensed retailers as treacherously stabbing American soldiers in the back. Raw materials and labor were being diverted from the war effort to an industry which debilitated the nation's capacity to defend itself. It was urged that wartime prohibition would stop the waste of grain and molasses and would remove a handicap on workers' efficiency.

"Liquor is a menace to patriotism because it puts beer before country," preached Prohibitionist Wayne Wheeler (Odegard, 1928: 72). The fact that names Pabst, Schlitz, and Blatz broadcast their national origin only did further injury to their interests.

In this atmosphere the Wartime Prohibition Act was passed in 1918. It followed a series of federal laws such as the Wilson Original Packages Act and the Webb-Kenyon Act, attempts to protect dry states from their wet neighbors.

The Wilson Original Packages Act was passed

on August 8, 1890, and provided that all intoxicating beverages shipped interstate would be subject to the laws of the destination state upon arrival. No mechanism for federal enforcement was provided.

The Webb-Kenyon Act, enacted March 1, 1913, was intended to reinforce the 1890 Act by providing that it was a violation of federal law to ship an intoxicating beverage interstate with the intent that it be used or sold in any manner in violation of the laws of the destination state. The lack of federal enforcement rendered the statute virtually meaningless.

The Reed Amendment, enacted four years later, provided a fine of \$1,000 for transporting liquor into a dry state with no greater effect.

None of the earlier acts met with substantial success in curbing the flow of liquor into purportedly dry regions, but they did mark a change in federal policy. Formerly liquor laws were designed solely to produce federal revenue; Congress now took cognizance of the role it could play in the regulation of consumption.

The role was actually forced upon a reluctant Congress at first. Indeed, the government had passed up numerous prior opportunities to involve itself in the temperance movement as such. The particular part it was to play was forecast by the Sons of Temperance who, in 1856, declared themselves for national constitutional prohibition.

Twenty years later, Congressman Henry Blair of New Hampshire introduced a prohibition amendment to the Constitution for the first time in Congress. As a senator, he introduced another such resolution in 1885, along with Senator Preston Plum of Kansas. After consideration by the Senate Committee on Education, the bill was reported out favorably and placed on the Senate Calendar in 1886. Nevertheless, no action resulted (Cherrington, 1920 : 317).

In the meantime, states continued the struggle between the wets and the dries, with great success for the temperance advocates. By 1913, nine states were under state-wide prohibition. In 31 other states, local option laws were in effect. By reason of these and other variants of regulatory schemes, more than 50% of the United States population was then under prohibition.

The national constitutional campaign was resumed as such in 1913 when the Anti-Saloon League went on record at its 15th National Convention in favor of immediate prosecution of the objective of constitutional amendment.

The National Temperance Council, founded at the same time, coordinated the activities of numerous temperance organizations with the same ob-

ject. In 1913, the demands of the League were formally presented to Congress by the Committee of 1,000.

The measure was then introduced in the House by Congressman Thompson and in the Senate by Senator Sheppard. The following year, the first joint resolution failed to secure the necessary two-thirds majority for submitting a constitutional amendment to the states. A second resolution was submitted in 1915 and favorably considered by the Judiciary Committees of both houses, but neither ever came to a vote.

Ultimately, in 1917, the resolution to prohibit the manufacture, sale, transportation or importation of alcoholic beverages in the United States was approved by Congress and sent to the states for ratification (Cherrington, 1920 : 317-330).

It took only one year and eight days for the 18th Amendment to secure the necessary ratification. On January 8, 1918, Mississippi proudly became the first state to ratify, and on January 16, 1919, Nebraska completed the job as the 36th state (Lee, 1963 : 42). By the end of February 1919, there remained only three hold-outs: New Jersey, Connecticut, and Rhode Island (Cherrington, 1920 : 330).

October 28, 1919, was the day that Congress enacted the National Prohibition Act—more often known as the Volstead Act—with the intent to give effect to the new constitutional amendment. Officially, the liquor drought was to begin on January 17, 1920. The celebrants of the occasion were concentrated in the membership of the Anti-Saloon League which could rightly claim that its consummate skill in pressure politics had maneuvered the country into its dry state.

The early experience of the Prohibition era gave the government a taste of what was to come. In the three months before the 18th Amendment became effective, liquor worth half a million dollars was stolen from government warehouses. By mid-summer of 1920, federal courts in Chicago were overwhelmed with some 600 pending liquor-violation trials (Sinclair, 1962 : 176-177). Within three years, 30 prohibition agents were killed in service.

Other statistics demonstrated the increasing volume of the bootleg trade. In 1921, 95,933 illicit distilleries, stills, stillworms and fermentors were seized. In 1925, the total jumped to 172,537 and up to 282,122 in 1930. In connection with these seizures, 34,175 persons were arrested in 1921; by 1925, the number had risen to 62,747 and to a high in 1928 of 75,307 (Internal Revenue Service, 1921, 1966, 1970 : 95, 6, 73). Concurrently, convictions

for liquor offenses in federal courts rose from 35,000 in 1923 to 61,383 in 1932.

The law could not quell the continuing demand for alcoholic products. Thus, where legal enterprises could no longer supply the demand, an illicit traffic developed, from the point of manufacture to consumption. The institution of the speakeasy replaced the institution of the saloon. Estimates of the number of speakeasies throughout the United States ranged from 200,000 to 500,000 (Lee, 1963: 68).

Writers of this period point out that the law was circumvented by various means. Although there may have been legitimate, medicinal purposes for whiskey, the practice of obtaining a medical prescription for the illegal substance was abused. It is estimated that doctors earned \$40 million in 1928 by writing prescriptions for whiskey.

The legal system was equally evasive; the courts convicted about seven percent of those charged with liquor violations (Sinclair, 1962: 193-195; Dobyns, 1940: 292). The exception for sacramental wine from protection under the Volstead Act also invited abuse. In 1925, the Department of Research and Education of the Federal Council of the Churches of Christ reported that:

The withdrawal of wine on permit from bonded warehouses for sacramental purposes amounted in round figures to 2,139,000 gallons in the fiscal year 1922; 2,503,500 gallons in 1923; and 2,944,700 gallons in 1924. There is no way of knowing what the legitimate consumption of fermented sacramental wine is but it is clear that the legitimate demand does not increase 800,000 gallons in two years (Dobyns, 1940: 297).

The smuggling trade was revived with new vigor and new incentives. Rum-runners, often under foreign flags, brought liquor into the country from Belgium and Holland. In 1923, there were 134 seizures of such vessels. The following year, 236 were apprehended (History of the Alcohol . . . , 28). With fewer risks, liquor was readily smuggled across the Canadian border. One way or the other, the Department of Commerce estimated that, as of 1924, liquor valued at approximately \$40 million was entering the United States annually (Sinclair, 1962: 198).

The manufacture of "near-beer" and industrial alcohol provided other opportunities for diversion from licit channels, while the salvage of the California grape industry was section 29 of the Volstead Act (27 U.S.C. § 46) which authorized the home production of fermented fruit juices. Although the section was allegedly inserted to save the vinegar industry and the hard cider of America's farmers, it was welcomed by home wine-makers as well. In the spirit of cooperation, the

grape growers even produced a type of grape jelly suggestively called "Vine-glo" which, with the addition of water, could make a strong wine within two months (Sinclair, 1962: 206).

One of the great ironies of the prohibition era was the fact, noted by the Wickersham Commission, that women happily took to drink during the experimental decade, and, what is more, did so in public. As the counterpart of the WCTU, the Women's Organization for National Prohibition Reform was founded, stating in its declaration of principles that Prohibition was "wrong in principle" and "disastrous in consequences in the hypocrisy, the corruption, the tragic loss of life and the appalling increase of crime which has attended the abortive attempt to enforce it" (Dobyns, 1940: 107).

Drinking at an earlier age was also noted, particularly during the first few years of Prohibition. The superintendents of eight state mental hospitals reported a larger percentage of young patients during Prohibition (1919-1926) than formerly. One of the hospitals noted: "During the past year (1926), an unusually large group of patients who are of high school age were admitted for alcoholic psychosis" (Brown, 1932: 176).

In determining the age at which an alcoholic forms his drinking habit, it was noted: "The 1920-1923 group were younger than the other groups when the drink habit was formed" (Pollock, 1942: 113).

AVERAGE AGE AT FORMATION OF DRINK HABIT

Period	Males	Females
1914.....	21.4	27.9
1920-23.....	20.6	25.8
1936-37.....	23.9	31.7

To be sure, the Volstead Act was enforced in the United States wherever it had popular support. In the rural South and West prohibition was effective and in some cases still is. The failures of prohibition enforcement were spotlighted in the big cities where the law was flagrantly defied and in the smaller towns, populated by miners and industrial workers, where the law was simply ignored (National Commission on Law Observance, 1931: 345).

Notwithstanding the weak enforcement of the Volstead Act, some believe that it was only the coming of the Depression with its demand for increased employment and tax revenues which finally killed the experiment (Gusfield, 1963: 127). Others observe that Prohibition was a by-product of the stress and excesses of war and could not

have survived in peacetime even under optimal economic conditions (Sinclair, 1962: 23-24). Finally, there are those who accuse the selfishly motivated businessmen of the United States for repeal which they allegedly brought about through the same high-pressure tactics so successfully employed by the partisans of temperance in the preceding decades (Dobyns, 1940: 5-130 *passim*).

Despite mixed motivations, the repeal movement was financed and driven by the Association Against the Prohibition Amendment (AAPA).

The members declared that "the principal business and objective of the Association shall be to educate its members as to the fundamental provisions, objects and purposes of the Constitution of the United States" (Dobyns, 1940: 5). They worked for the election of Congressmen who agreed to submit the question of repeal to a vote of the people in each state. They were successful fund-raisers and by January 1, 1931, had almost \$3 million in cash in the bank (Dobyns, 1940: 9).

The sources of the funds included a number of converts from the dry cause. In 1928, the DuPont family abandoned the dries, followed in 1932 by John D. Rockefeller and S. S. Kresge (Gusfield, 1963: 128). Their conversion was effected under the strong influence of the income tax. Doggedly, Pierre S. DuPont circulated a brochure concluding that "the British liquor policy applied in the United States would permit of the total abolition of the income tax both personal and corporate" (Dobyns, 1940: 22).

Concern for the effects of the prohibition laws was not limited to the private, wealthy sector. In 1928, a dry-wet confrontation emerged in the presidential election between Alfred E. Smith, a Catholic New Yorker, and Herbert Hoover. Hoover solemnly praised the "great social and economic experiment" and tightened his grip on the dry vote.

Notwithstanding the popular image of Smith as a staunch wet, his platform tried to avoid any outright repeal sentiment. He asked instead for an amendment of the Volstead Act which would provide a "scientific definition of the alcoholic content of an intoxicating beverage." This would enable each state to interpret and apply the federal standard within its borders. In addition, he favored what was to be known as the "state store" system of manufacturing and dispensing alcoholic beverages (Lee, 1963: 212).

In retrospect, it is difficult to ascertain whether it was the religious campaign or the dry campaign which defeated Al Smith. H. L. Mencken may have written accurately that "if [Al Smith] loses, it will be because those who fear the Pope out-

number those who are tired of the Anti-Saloon League" (Sinclair, 1962: 303). Nevertheless, Prohibition survived the 1928 election, as did Hoover's campaign pledge to establish a commission to investigate the conditions under Prohibition. Head of the Commission was George W. Wickersham, former Attorney General under Taft. Although the Commission's purpose was set forth as an examination of the problems of enforcement, it soon decided to undertake much broader policy considerations.

The Commission's report, published in 1931, included opinion surveys, statistics on the number of deaths connected with enforcement efforts, testimony by consultants and experts, and an analysis of the organization, personnel and methods of prohibition enforcement. On the basis of the five-volume report, the Wickersham Commission ironically concluded in its summary that:

There have been more sustained pressures to enforce this law than on the whole has been true of any other federal statute, although this pressure in the last four or five years has met with increasing resistance as the sentiment against prohibition has developed That a main source of difficulty is in the attitude of at least a very large number of respectable citizens in most of our large cities and in several states, is made more clear when the enforcement of the national prohibition act is compared with the enforcement of the laws as to narcotics. There is an enormous margin of profit in breaking the latter. The means of detecting transportation are more easily evaded than in the case of liquor. Yet there are no difficulties in the case of narcotics beyond those involved in the nature of the traffic because the laws against them are supported everywhere by a general and determined public sentiment (Sinclair, 1962: 367-368).

Notwithstanding this dire analysis, 10 out of the 11 commissioners signed a summary of conclusions of the report which stated that the Commission as a whole opposed the repeal of the 18th Amendment, the entry of the Federal or state governments into liquor business, or even the modification of national prohibition to permit the sale of light wines and beer (Sinclair, 1962: 364).

Walter Lippmann commented, "What was done was to evade a direct and explicit official confession that Federal prohibition is a hopeless failure" (Sinclair, 1962: 365). Whether or not Lippmann correctly read the Commission's intentions, there was clearly a gap between the input and the outcome of the report.

It is difficult to assess the relative numbers of the wet and dry partisans during the last few years of national prohibition. In terms of strength, however, the wets surely had the edge which less than two decades before had belonged to the dries. The new wet strength showed up at the National Convention of the Democratic party held in Chicago in 1932, where Mayor Cermak of that city filled the

galleries with his supporters. And, though Franklin D. Roosevelt had wooed the dry vote for some time, he now came forward on a platform which favored the outright repeal of the 18th Amendment. Accepting his nomination, he stated:

I congratulate this convention for having had the courage, fearlessly to write into its declaration of principles what an overwhelming majority here assembled really thinks about the 18th Amendment. This convention wants repeal. Your candidate wants repeal. And I am confident that the United States of America wants repeal (Dobyns, 1940: 160).

While dry leaders looked on with disgust, Roosevelt was elected president and Congress turned a somersault. The repeal amendment was introduced February 14, 1933, by Sen. Blaine of Wisconsin and approved two days later by the Senate 63 to 23. The House followed four days later, voting 289 to 121 to send the amendment on to the States (Lee, 1963: 231). It required approval by 36 states. Michigan was the first state to ratify it; 39 states voted on the amendment during 1933, with 37 approving its ratification and two—North and South Carolina—voting against its ratification. The final ratification was accomplished on November 7, 1933, when Kentucky, Ohio, Pennsylvania and Utah gave their approval.

Congress officially adopted the 21st Amendment to the Constitution on December 5, 1933.

Within three weeks of taking office, President Roosevelt witnessed the first sales of 3.2 beer, following a redefinition by statute of the terms "intoxicating liquors." The more popular, higher alcohol-content beer was relegalized by Congress under the Cullen-Harrison Act. Sale of beer became legal on April 7, 1933, in the District of Columbia and the 20 states where state laws did not prohibit its sale. During the next four years the remaining states changed their laws to permit its sale, with Alabama and Kansas in 1937, as the last to join the legal sale ranks.

The job of total repeal was accomplished with the help of the determined AAPA during the succeeding year. Their lawyers assisted the states in preparing bills for conventions and release of various forms of political propaganda, thereby enacting a serious satire on the 1919 campaign launched by the Anti-Saloon League. Notwithstanding their high and enduring constitutional principles, on December 31, 1933, with repeal a reality, the AAPA ceased to exist and sent its files to the Library of Congress. "Having attained its objective . . . the Association resisted the temptation to linger on as a 'sentinel of American liberty'," the *New York Times* observed in the organization's obituary (Dobyns, 1940: 132).

PROHIBITION IN PERSPECTIVE

During 13 years, what did Prohibition accomplish? There is no single compilation of Prohibition statistics which would enable us to determine the degree of success which Prohibition enjoyed during its lifetime.

In discussing the relative successes and failures of Prohibition, most observers conclude that the undertaking failed. "Prohibition destroyed the manufacturing and distributive agencies through which the demand for liquor had been legally supplied. But the demand remained" (Hu, 1950: 51).

In its Report on the Enforcement of the Prohibition Laws of the United States, the Wickersham Commission concluded that the country had prohibition in law but not in fact. They reported:

There was general prevalence of drinking in homes, clubs and hotels. . . . Throughout the country people of wealth, businessmen and professional men and their families, and the higher paid workmen and their families, are drinking in large numbers in open flouting of the law. And neither Congress nor the states set up adequate machinery or appropriated sufficient funds for the enforcement of the prohibitory legislation. Federal and state legislation, as a matter of fact, strove to satisfy so that, as it was aptly said, the dries had their prohibition law and the wets had their liquor (Hu, 1950: 52).

Although some view the theory of prohibition as reasonable, it is generally conceded that the realities of manufacture and distribution make it unworkable, for in one form or another, alcohol can be easily produced by farmers, high school chemistry students, and ordinary citizens.

Prohibition has been attempted many times in various parts of the world; except for some Moslem areas, attempted legislative controls have not proven adequate. In spite of many sincere and determined efforts, no country in Europe or the Americas has yet succeeded in eliminating the use of alcohol by society by legislative fiat (H.E.W., 1968: 41).

Those who had been accustomed to using alcoholic beverages sought other sources of supply "in disregard of the legislative mandate. In the presence of high pecuniary returns there [was] a strong tendency for supply to meet demand in spite of prohibition" (Hu, 1950: 51).

Consumption. Although it is impossible to make an accurate determination of the consumption of alcoholic beverages under Prohibition—since there are no statistics compiled regarding the output and sale of the outlaw industry—estimates have been made by those examining the economic results of Prohibition as well as by the Bureau of Prohibition of the U.S. Department of Justice. The Bureau placed the consumption of alcoholic beverages at 73,831,172 gallons, or 0.6 gallon per capita

in fiscal year 1930 as contrasted with 166,983,681 gallons or 1.7 gallons per capita in 1914.

In terms of pure alcohol, the Bureau concluded that per capita consumption in 1930 was 35% of the 1914 rate of legal consumption. These estimates have been criticized as being far too low (Tillitt, 1932: 35).

The figures published by the Department of Commerce in the *Statistical Abstract of the United States* reflect a different picture. The average annual per capita consumption of hard liquor from 1910-1914, inclusive, was 1.46 proof gallons. "This 5-year period was before the rise of abnormal conditions coincident to the World War and may be taken as fairly indicative of the normal rate of drinking that prevailed in the Pre-Prohibition era" (Rosenbloom, 1935: 51).

The per capita rate for the Prohibition years is computed to be 1.63 proof gallons. This is 11.64% higher than the Pre-Prohibition rate (Tillitt, 1932: 35). Based on these figures one observer concluded: "And so the drinking which was, in theory, to have been decreased to the vanishing point by Prohibition has, in fact, increased" (Tillitt, 1932: 36).

Others disagree with the implications of these unverified statistics noting that persons of limited means, formerly unable to patronize the expensive speakeasies, once again had cheap access to alcohol following repeal and thereby increased consumption (Harrison & Laine, 1936: 1).

Popular opinion is equally inconclusive; a survey conducted by the American Institute of Public Opinion in 1936 asked whether conditions (drinking customs, consumption, etc.) were better, worse or without significant change since Repeal. 36% indicated a worsening and 31% could see no appreciable change (Harrison & Laine, 1936: 2). Perhaps indicative of a gradual process of adjustment, however, the results of later Gallup polls suggest a gradual decline in the use of alcohol. Of a national sample, 67% indicated they used alcohol in 1945, in contrast to 60% in 1950 and 55% in 1958 (Gusfield, 1963: 135).

Alcoholic Psychoses. There was a notable decrease in alcoholic psychoses and in deaths due to alcoholism immediately preceding the enactment of Prohibition and a gradual increase in alcoholic psychosis and in deaths from alcoholism in the general population since 1920. "These facts appear to indicate that since 1920, Prohibition [was] increasingly impotent as a means of preventing excessive use of alcohol to an extent productive of serious mental disorders and untimely death. 1920 marks the end of the decline and the beginning of the rise in the trends of alcoholic

mental diseases and of deaths from alcoholism in the general population" (Brown, 1932: 88).

The increase in mental disorders and deaths from alcoholism after 1920, however, also coincides with the heavy consumption period—early 1900's—which would have resulted in an increase in alcoholism some years later.

The following table reflects the decrease prior to 1920 and the subsequent gradual increase in percentage of alcoholic psychosis among new admissions to 56 hospitals in 25 states as well as among admissions to New York civil state hospitals (Brown, 1932: 76-77; Malzburg, 1949: 294):

Year	56 hospitals		New York State—civil hospital (percent admissions with alcoholic psychoses)	
	All new admissions	New admissions with alcoholic psychoses	Number	Percent
1910	17,439	1,486	8.5	...
1911	17,299	1,366	7.9	...
1912	17,570	1,567	8.9	...
1913	17,525	1,633	9.3	9.3
1914	19,134	1,573	8.2	7.4
1915	18,875	1,331	7.1	5.7
1916	17,929	1,370	7.6	6.1
1917	20,041	1,576	7.9	8.2
1918	19,741	1,021	5.2	5.2
1919	19,737	841	4.3	4.1
1920	19,579	485	2.5	2.0
1921	20,368	567	2.8	2.8
1922	20,741	798	3.8	3.2
1923	20,316	861	4.2	4.0
1924	19,818	896	4.9	5.4
1925	20,857	1,017	4.9	5.8
1926	20,911	997	4.8	5.9
1927	21,982	1,268	5.8	7.0
1928	23,293	1,257	5.4	6.0
1929	23,242	1,380	5.9	6.2
1930	24,100	1,251	5.2	6.0

Deaths from Alcoholism. In New York City, from 1900 through 1909, there was an average of 526 deaths annually attributable to alcoholism. From 1910 through 1917, the average number was 619. It plummeted to 183 for the years 1918 through 1922. Thereafter, the figure rose, averaging a new high of 639 for the years 1923 through 1927 (Rice, ed., 1930: 122).

Total deaths from alcoholism in the United States show a comparable trend, with the gradual increase resuming somewhat earlier, about 1922 (Brown, 1932: 61, 77; Feldman, 1927: 397; U.S. Department of Commerce, 1924: 55).

The highest death rates from alcoholism occurred during the decade prior to Prohibition as did the highest death rates from cirrhosis of the

Year	Deaths from all causes— rate per 100,000	Deaths from alcoholism— rate per 100,000
1910	1,496.1	5.4
1911	1,418.1	4.9
1912	1,388.8	5.3
1913	1,409.6	5.9
1914	1,364.6	4.9
1915	1,355.0	4.4
1916	1,404.3	5.8
1917	1,425.5	5.2
1918	1,809.1	2.7
1919	1,287.4	1.6
1920	1,306.0	1.0
1921	1,163.9	1.8
1922	1,181.7	2.6
1923	1,230.1	3.2
1924	1,183.5	3.2
1925	1,182.3	3.6
1926	1,222.7	3.9
1927	1,141.9	4.0
1928	1,204.1	4.0
1929	1,192.3	3.7

liver. These statistics should be qualified by the observations of Dr. Charles Morris, Chief Medical Examiner for New York City: "In making out death certificates (which are basic to Census Reports) private or family physicians commonly avoid entry of alcoholism as a cause of death whenever possible. This practice was more prevalent under the National Dry Law than it was in pre-prohibition time" (Tillitt, 1932: 114-115).

Even if reliable, *per se*, such statistics may be unrelated to the consumption of alcoholic beverages in any given year. Another writer of this period noted: "The relation of fatal alcoholic diseases to consumption of alcohol must be one extending over a long period of years and the actual duration of the critical period can hardly be estimated" (Jellinek, 1942: 484). According to one sociologist, rates of alcoholism and related mental and physical diseases reflect past drinking habits, developed ten to 15 years earlier (Gusfield, 1963: 119).

A shorter "lead time" is suggested by a mental hygiene statistician who attributes the temporary reduction in alcoholic psychoses "to the legal restriction of the sale and use of alcoholic beverages, made effective by the support of public opinion which during the war period had discountenanced self-indulgence of all sorts" (Brown, 1932: 88). He adds, however, that the notable increase in alcoholic psychoses and deaths from alcoholism towards the end of the prohibition era (1927-1932) indicated that:

... since 1920, prohibition has become increasingly impotent as a means of preventing excessive use of alcohol

to an extent productive of serious mental disorders and untimely deaths (Brown, 1932: 88).

The highly limited statistical label of death from alcoholism has been noted elsewhere:

The trend of death from alcoholism reflects hardly anything else than progress in the treatment of the so-called diseases of chronic alcoholism. Nevertheless, statistics of death from alcoholism have been used by both Drys and Wets to prove that Prohibition or repeal has greatly improved the rate of death from alcoholism. . . . Death from alcoholism is simply not an index of the prevalence of inebriety. Death from alcoholism could fall to zero in response to medical progress, while at the same time the rate of inebriety might rise many fold (Jellinek, 1947: 39).

Arrests. Arrests for drunkenness also provide a source of information about the extent of drinking in the United States. It must be noted, however, that statistics of this sort vary with local police policies. For example, during a six-year period in the 1930's, the arrests for drunkenness were from 14 to 31 times higher in Philadelphia than in New York (Kolb, 1941: 608).

Nevertheless, gross statistics drawn from 383 cities indicate that arrests for drunkenness per 10,000 population reached a high of 192 in 1916 and fell to 71 in 1920. From this level, they rose steadily again to reach 157 in 1928 (Warburton, 1932: 102). Of course, arrests prior to Prohibition may not bear the same relation to the use of alcohol as they did subsequently, Warburton theorizes:

... [U]nder Prohibition, especially during the early years, police were more strict in making arrests, and . . . a larger proportion than formerly of persons appearing on the streets under the influence of liquor are arrested. Also, since the sale of liquor is illegal and cannot be obtained in public saloons, and when the police are more strict in arresting intoxicated persons, it is reasonable to suppose that drinking is less public and that fewer drunken persons appear on the streets relative to the quantity of liquor consumed (Warburton, 1932: 103).

Nevertheless, the cyclical trend suggested by these figures coincides with statistics on alcoholism (Brown, 1932: 61, 71, 77). Whatever their independent validity, however, they correlate with the theory of one author that:

... [T]he 18th Amendment could not have been passed without the support of the psychologically tolerant, made temporarily intolerant by the stress of war. But when the moderates deserted the drys in the time of peace, the hard core of the movement was revealed (Sinclair, 1962: 23-24).

Without the support of the moderates, the author theorizes, Prohibition was to become itself a symbol of excess, unsupported by the vast majority of the population.

Outcome. What, then, did Prohibition accomplish? To a great extent it eliminated the saloon from American life. While bars and taverns reopened joyfully following repeal, they ceased to be the centers of systematic political corruption and

debauchery which they had once been. Part of this may be attributable to the greater sophistication of the electorate and politics generally. Part, no doubt, is owing to the fact that women were welcome as customers in the new cocktail lounges, having shown themselves to be eager patrons of the speakeasies.

And finally, the change in the character of the saloon was effected by public determination that it should be changed. This attitude was expressed in the post-repeal statutes concerned with the physical appearance of the saloon and the character of persons authorized to operate them.

Prohibition did make the nation conscious that corruption of the law and of the populace may be the consequence of a law which is not reflective of the morals and mores of the time. It played out some of the deepest social class resentments, culminating in the realization that the behavioral standards of some could not be impressed upon others. It demonstrated that the fervor of war and the cult of patriotism may be abused—and abuse the country in return.

Repeal reimposed the burden of regulation upon the states. They were required to develop a system of control directed at the particular objectives they wished to achieve. The post-repeal era was to prove an exercise not only in states' rights but in states' responsibilities.

1933–1971: AFTER THE DELUGE

On December 4, 1933, the day before final ratification of the repeal amendment, the President established the Federal Alcohol Control Administration, pursuant to Executive Order No. 6474. FACA was to have the power to grant or revoke permits to engage in the alcoholic beverage industry—not the brewing industry—as well as the power to control plant capacity and production; it was also to engage in consumer protection through regulations designed to prevent misbranding and false advertising of alcoholic beverages. In addition, FACA prohibited the ownership of retail outlets by manufacturers and wholesalers (Harrison & Laine, 1936: 24–29).

This scheme fell under the *Schechter Poultry* decision by the Supreme Court. The Treasury, Federal Trade Commission and Food and Drug Administration then moved in. A new alcohol control agency was proposed, leading to a dispute as to whether it should be independent or part of the Treasury.

Joseph H. Choate, Jr., first head of the FACA, testified that:

The Treasury has not been an organization whose duty it was to study and understand the liquor business, the

interest of the public in that business, or the method by which that business ought to be carried on in order to subserve the interests of both the public and state governments. It has been a creature of one idea, that one idea being, quite properly, to get revenue and get it as fast and as copiously as it could (Harrison & Laine, 1936: 33).

The Department of the Treasury agreed with Choate's analysis.

Nevertheless, this testimony was disregarded and the Federal Alcohol Administration was created as a division of Treasury in 1935. This arrangement was superseded in 1936 when the Liquor Tax Administration Act established FACA as an independent agency of the government. Soon thereafter it was reorganized, once again as an arm of the Department of Treasury, and even its separate identity was abolished as of June 30, 1940. Today, the Treasury retains full authority to administer all federal liquor laws.

The current federal laws regulating trade in intoxicating beverages may be classified in the following categories:

(1) *Revenue*: Taxes are imposed on rectifiers, brewers, manufacturers of stills, dealers; wholesale and retail stamps are required on distilled spirits (26 USC, 1971a).

(2) *Criminal Penalties*: Criminal penalties are provided for unauthorized production, sale or possession, transportation into states prohibiting sale, C.O.D. shipments and unlabeled shipments (26 USC, 1971b; 18 USC, 1971).

(3) *Interstate Transportation*: Interstate shipments of alcoholic beverages are subject to the laws of the receiving state (27 USC, 1971a).

(4) *Permits*: Importers, manufacturers and sellers of intoxicating beverages must have permits (27 USC, 1971b).

(5) *Unfair Practices*: Exclusive sales arrangements, tying, bribery and false advertising or labeling are prohibited (27 USC, 1971b).

The intent of the Federal Government to reserve all decisions regarding regulation of consumption is quite clear from federal statutes presently in force. The states have reacted with a variety of regulatory schemes controlling to varying degrees the seller, the buyer, the place, time and opportunity for sale and, through revenue measures, the cost.

In 18 states, the state store or state monopoly system has entirely displaced the private wholesale or retail sale of intoxicating beverages. Other states permit the sale of liquor, wine and beer through private, licensed outlets.

The license system may be implemented by different means. Administration may be solely by

the state, or control may be shared by the counties or municipalities.

Local control may be exercised to a greater or lesser degree. For example, in the 1930's, immediately after repeal, Massachusetts and New Mexico permitted local boards to grant retail licenses only after investigation and approval of applicants by the state board. During the same period, other states, predominantly in the South, gave local authorities supplemental powers to issue licenses while requiring concurrent state licenses as well.

In some jurisdictions, the local license had to be obtained first, and the state license could be granted thereafter. In Illinois, however, the state commission's power was curtailed by requiring that a state license be granted once the local license was secured. And although the state was given the power to revoke its license, it was given no power to inspect places of sale to determine grounds for revocation (Harrison & Laine, 1936: 50-53).

The license system has been suspect by many wets as well as drys because of the opportunities it may afford for political abuse. On the other hand, there is substantial opinion which holds direct participation in the sale of liquor in contempt. As to the relative efficacy of each, there are no reliable means of making a judgment. Each apparently depends on the integrity and capacity of the individuals charged with the job of enforcement and oversight.

Superimposed on the basic system of regulating the sale of liquor are other sumptuary laws which are directed at the purchaser. Sales are not permitted to minors or intoxicated persons. Credit is often prohibited on liquor sales as well. Criminal penalties may be imposed for driving under the influence of alcohol as well as for drunken behavior.

The sale of liquor by the drink is permitted in most states, but some still require that it be sold in packaged form only, reflecting the continuing fear of the resurrection of the saloon. In many states Sunday closing laws are enforced, and mandatory closing times are imposed upon bars and package stores alike. Sales are prohibited almost uniformly on Election Day, at least during polling hours, and, in many places, on Thanksgiving, Memorial Day, Christmas and other holidays.

Local option is still granted in most states, in voting units ranging from the plantation to the city or county. Of the monopoly or control states, only Utah and Wyoming fail to make provision for local option at all. Wyoming maintains a state monopoly at the wholesale level only. Private retailer sellers are licensed.

In the remaining monopoly states, it is often possible for towns within a wet county to go dry, and sometimes vice versa. Of the 33 license states, only 10 (including the District of Columbia) do not permit local option at any level.

Notwithstanding the various patterns of regulation, Senator Arthur Capper's words of the 1930's still seem to be correct:

We can repeal prohibition, but we cannot repeal the liquor problem (Peterson, 1969: 126).

Neither the states nor the population have yet come to grips with the problems of alcoholism and alcohol abuse. Both the monopoly system and the license system are directed at other concerns. They, no more than Prohibition, have been able to control or even alleviate the very real and dire consequences of alcohol use by society.

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History of Tobacco Regulation*

Since 1613, when John Rolfe introduced a successful experiment in tobacco cultivation in Virginia (Morison, 1965: 52) the leaf has assumed major social, industrial, economic and medical implications. Consequently, persons concerned with tobacco on a commercial or personal basis have

been subject to a variety of different regulations over the past 360 years.

Tobacco has been attacked by social observers and medical authorities for the damage it has allegedly done to the social and physical condition of man. Yet it has also provided a substantial source of revenue to the state and Federal governments of the United States.

As is now the case with alcohol, tobacco has long been subject to regulatory controls over the quantity and quality of production. On the other hand, sumptuary laws affecting tobacco have been far fewer—and weaker—than those aimed at alcohol. In fact, there has never been a time when tobacco was prohibited throughout the United States although consumption under certain circumstances has been forbidden at various times in different jurisdictions.

Tobacco—associated today with smoking of cigarettes, and to a lesser extent, of pipes and cigars—has been popular at times for both snuffing and chewing. Indeed, until about 1870 cigarettes were relatively rare in the United States, and almost all tobacco consumed domestically was chewed during the mid-19th century (Gottsegen, 1940: 9-10).

Whatever the preferred mode of consumption, however, the commodity has always been the subject of debate respecting the appropriate governmental attitude. On the one hand, proponents of the leaf stress its social benefits and its economic and industrial significance. Some enthusiasts even endorse its alleged medical and psychological benefits. Opposed are those who cite the health hazards of smoking and others who are convinced of its immorality.

The motivation for regulation has come from both sides of the controversy. Most sumptuary restrictions were fostered by the latter group in an effort to suppress the habit. Those who seek to institutionalize and foster use of the drug focus on the regulation of the quantity and quality of production.

This section does not attempt to weigh the merits of the various regulatory schemes. Rather, it will trace from John Rolfe's day the three threads of regulation which have circumscribed both the producer and consumer of tobacco in the United States.

REGULATION OF PRODUCTION

In the opinion of King James I of England, tobacco was "loathsome to the eye, hateful to the nose, harmful to the brain" and "dangerous to the lungs" (Middleton, 1953: 93). Whether the King was prescient, or simply sensitive, was irrelevant

*This section is based in part on a paper prepared for the Commission by Jane Lang McGrew, an attorney from Washington, D.C.

in the 17th and 18th centuries, however, for tobacco rapidly became the mainstay of the Maryland and Virginia economies. Within seven years of John Rolfe's first imaginative experiment, Virginia exported nothing but tobacco and a little sassafrass to England (Middleton, 1953: 93-94). Almost as quickly, the leaf became the staple of the colony of Maryland and competition developed in Carolina as well.

In Massachusetts Bay, the product fared less well. The first general letter (April 17, 1629) from an official of the New England Company to the Massachusetts Bay settlers prohibited the planting of tobacco except in small quantities for medicinal purposes (Werner, 1922: 100). Next door in Connecticut, however, the colonists attempted to rival the southern planters with a local leaf. Indeed, the infant industry was coddled by the protectionist General Court at New Haven, which promulgated a rule in 1641 that:

No persons within this jurisdiction shall [smoke] any other Tobacco but such as is or shall be planted within these [districts], except they have license from the Courte (Tobacco Institute, Connecticut, undated: 20).

Notwithstanding the royal attitude and the fear of certain patent holders of the London Company that Virginia had become a "colony founded on smoke" (Tobacco Institute, Virginia, 1971: 19; Middleton, 1953: 94), England encouraged the growth of the tobacco industry. Monopolies to import tobacco from the colonies were granted by the Crown to court favorites who soon prospered as a result of this trade.

In 1621, a bill was introduced which, according to one contemporary commentator, was "extremely remarkable": No tobacco was to be imported after the 1st of October, 1621, except from Virginia and Bermuda; and, after that day, none was to be planted in England. Although the act was initially defeated by the House of Lords, James I in 1622 himself granted the import monopoly to the Virginia and Bermuda companies and prohibited the domestic cultivation of tobacco (Brooks, 1952: 88).

The system worked well for the British importers, but the methods of financing they employed became onerous to the colonial planters. The tobacco was marketed by consignment to an English merchant who deposited the proceeds of the sale to the planters' accounts. Often, however, the high commissions charged and the cost of goods ordered by the Virginians in payment for their crop contributed to the growth of colonial indebtedness. The extension of credit to cover the deficiencies caused the debts to grow constantly, but the only alternative to the consignment system

was to sell the product in the colony at a lower price (Middleton, 1953: 104-107).

Industrial competition in this market provided the impulse for certain regulatory relief. Importation of the Carolinian product into Virginia was forbidden by an act of 1679, amended in 1726 to prohibit importation by land as well as by sea. Nor was North Carolina permitted to export its tobacco from Virginia ports. In Great Britain, the Privy Council looked with disfavor upon such colonial legislation which threatened the financial well-being of the merchants and so disallowed the Virginia Act in 1731 (Middleton, 1953: 114-115).

Competition similarly induced both Virginia and Maryland to enact laws prescribing the dimensions of the hogshead in which tobacco was packaged in 1658. Vying for purchasers, the two colonies gradually enlarged the statutory size of the hogshead until, under edict from the Privy Council in Britain, Maryland was ordered to pass a gauge act establishing the size of the hogshead in the same dimensions as those fixed in Virginia.

Notwithstanding such legislation, however, the manufacture of hogsheads was still characterized by carelessness and irregularity until the warehouse inspection system went into effect in the 18th century (Middleton, 1953: 116-117).

It was not long before the colonial planters were faced with a more serious problem—overproduction—which was causing a decline in prices as well as quality of the leaf. In 1619, the first tobacco inspection law was passed by the Virginia House of Burgesses, ordering the lowest grade of tobacco to be destroyed and prohibiting "second growth" tobacco and the marketing of trash leaves.

This act was followed in 1621 by a more direct attempt to restrict production. Each cultivator was required to limit his growth to 1000 plants of nine leaves each. Although this order was soon rescinded as a patent failure, an act of 1629 permitted each planter to tend only 3000 plants with an additional allowance of 1000 for non-laboring women and each child (Brooks, 1952: 96).

Notwithstanding the statutory effort, the problem intensified. Virginia attempted to encourage the other tobacco colonies to reach agreements restricting plantings, but in Maryland, Lord Baltimore resisted. If planters were poor, he asserted:

It is not from the low price of Tobacco, but from their owne sloth, ill husbandry and profusely spending their croppe in Brandewine, and other liquors (Robert, 1949: 11).

Carolina, Maryland and Virginia actually reached a decision to prohibit the planting of the staple from February 1667 to February 1668. This "stint" proved a less effective means of control

than the winds of 1667, which almost destroyed the crop ready for harvest that year (Tobacco Institute, Virginia, 1971: 19).

Acts of God failed to provide an ultimate solution, however, and severe economic dislocation in Maryland and Virginia intensified. By 1681, the Virginia governor, Lord Culpeper, complained:

. . . [T]hat which is more to us than all other things put together, and will be the speedy and certain ruin of the colony, is the low price of tobacco. The thing is so fatal and desperate that there is no remedy; the market is overstocked and every crop overstocks it more. It is commonly said that there is tobacco enough now in London to last all England for five years. . . . Our thriving is our undoing, and our purchase of negroes, by increasing the supply of tobacco, has greatly contributed thereto (Brooks, 1952: 112-113).

The failure of the Virginia Assembly to pass another act requiring a "stint" led the so-called "cutters and pluckers" to take the matter into their own hands in 1682 by burning both their own crops and the plants of their neighbors (Roberts, 1949: 11). The riot stimulated legislative action in 1684 of a less helpful sort: the destruction of tobacco was made a criminal offense, subject to the death penalty (Brooks, 1952: 12).

Seventeenth century quality control laws proved no more successful in the effort to relieve the depression of the industry. Renewed efforts were made in early years of the next century, however. In 1713, the Virginia House of Burgesses established a warehouse system to enforce tobacco inspection. Forty public warehouses were created.

Strong opposition to the system led the Privy Council to disallow the act in 1717, but the ensuing depression of the 1720's was convincing evidence of the need for relief. Accordingly, the system was reinstated with British approval in 1730, complete with public warehouses and official inspectors (Middleton, 1953: 120-121).

The apparent success of the system appealed to Maryland, suffering also from a surfeit of tobacco. "Tobacco, our money, is worth nothing," wrote one Marylander in 1724, "and [there is] not a Shirt to be had for Tobacco this year in all our country" (Tobacco Institute, Maryland, 1971: 21).

Tobacco riots ensued when the Maryland Assembly initially refused to follow Virginia's example. One individual was moved to inform Lord Baltimore that no improvement in the economic state of the colony was possible until inspection laws were passed that "will prevent the sending to Market Such trash as is unfit for any other use but Manure" (Tobacco Institute, Maryland, 1971: 23). Accordingly, Maryland followed Virginia in the creation of an inspection system in 1747, and Carolina did likewise in 1754 (Brooks, 1952: 165).

Tobacco entirely dominated the economic and

social structure of Virginia and Maryland. "Tobacco requires us to abhor communities or townships," wrote a 17th century governor of Maryland, "since a planter cannot carry on his affairs without considerable elbow room within his plantation" (Brooks, 1952: 98).

In Virginia, tobacco had gained such ascendancy that it was used as money. For example, when, in 1621, a cargo of twelve young women made its way to the colony, each one was valued at 120 pounds of the best leaf (Brooks, 1952: 93). By law, Virginia's ministers were paid in tobacco at 16,000 pounds annually in 1696. The law provided that:

A competent and sufficient provision for the clergy will be the only means to supply this dominion with able and faithful Ministers whereby the glory of God may be advanced, the church propagated, and the people edified (Werner, 1922: 102).

Not until the Option Act was passed by the Virginia Assembly in 1755 could the clergy's fees be paid in either money or tobacco (Brooks, 1952: 167).

The regulation of tobacco in the colonies was devised in response to the industry with the intent to further the prosperity of the planters who dominated the economy. This theme continued to pervade all related regulatory efforts in the tobacco-producing states thereafter, as new practices developed in the marketing of the leaf.

The initial hogshead inspection system gradually gave way to the sale of loose-leaf tobacco by auction. In 1849 the Virginia Code recognized these methods in lieu of the sale of hogsheads of the leaf as provided in the 1730 Act. By 1865, the tobacco auction had completely replaced the earlier marketing techniques in Virginia (Tobacco Institute, Virginia, 1971: 28-29).

More than a half century later Maryland followed suit. In 1939, the looseleaf auction warehouse system was introduced to replace the hogshead system, and the conversion occurred almost overnight. The practices engaged in are regulated by the Maryland State Tobacco Authority, established in 1947 by law. The Authority itself is supervised by eight representatives selected by the Governor from the producing counties, the University of Maryland, the buyers and the sellers (Tobacco Institute, Maryland, 1971: 9-10).

The Federal Government came to recognize the significance of the tobacco industry in response to state pressures. Accordingly, since 1930, several bills have been enacted to aid the growers.

Enacted in 1935, the Tobacco Inspection Act directs the Secretary of Agriculture to establish quality standards and to designate auction markets (7 U.S.C. 511 (b) and (d)). The following

year, the Tobacco Control Act was passed, bestowing Congressional approval upon state compacts which regulate the production of tobacco, and subsidizing the expenses of the state commissions involved (7 U.S.C. 515). Thus, the two elements of initial colonial regulation were preserved: the encouragement of quality and the discouragement of quantity.

The latter objective was further implemented by the Agricultural Adjustment Act of 1938. Since that time, parity payments have been made to tobacco producers:

In amounts which, together with the proceeds thereof, will provide a return to such producers which is as nearly equal to parity price as the funds so made available will permit (7 U.S.C. 1303).

In addition, the Secretary of Agriculture is authorized to set national marketing quotas respecting each kind of tobacco (7 U.S.C. 1312), to apportion the quotas among the states, and to allot the portions among the farms (7 U.S.C. 1314). Penalties are imposed for overproduction (7 U.S.C. 1314).

There is nothing subtle about these measures, of course. Their intent is obvious: to assure the economic stability of an industry which, as of 1960, provided the United States population with more than 150,000,000 pounds of manufactured tobacco for consumption annually (Heimann, 1960: 93), and which provided more than \$4.8 billion in taxes in 1971 (USDA, Tobacco Situation, 1971b: 44).

During the same year, growers' gross receipts reached about \$900 million (Tobacco Tax Council, 1970: 2), while cigarette sales alone grossed for the manufacturer and seller approximately \$5 billion (Tobacco Tax Council, 1970: 53). The commercial motivation is sound enough if considered abstractly. When combined with the revenue incentive, however, it has largely obscured sumptuary controls.

REGULATION FOR REVENUE

Alexander Hamilton's tax package of 1794 proposed the first federal excise taxes upon tobacco products. To the distress of Philadelphia snuff manufacturers (Brooks, 1952: 146), however, the tax was restricted after serious Congressional debate to their product only.

James Madison led the opposition to a general tobacco tax; his views were summarized in the *Annals of Congress* on May 2, 1794:

As to the subject before the House, it was proper to choose taxes the least unequal. Tobacco excise was a burden the most unequal. It fell upon the poor, upon the sailors, day-laborers, and other people of these classes, while the rich will often escape it (Robert, 1949: 100).

The legislative decision was probably tempered as well by considerations of the enforceability of the measure: snuff had to be manufactured, while quid and pipe tobacco were often homegrown leaf at the time (Heimann, 1960: 155). In any case, the snuff bill was ultimately enacted, modified, suspended and repealed, with small, if any, effect upon federal revenues.

The opportunity to distill tax money from tobacco was seized upon more vigorously at the time of the Civil War. On July 1, 1862, an *ad valorem* tax was imposed upon cigars for the first time. This tax was raised two years later when a separate tax upon cigarettes was also imposed (Werner, 1922: 358). (Even the Confederacy sought to levy a tax-in-kind upon tobacco crops, but was precluded from doing so by the inspection system which required the inspector to deliver the full amount of tobacco specified in the warehouse receipt (Robert, 1949: 117).)

Thereafter, the taxes were raised in 1865, 1866 and 1875. A temporary reduction followed, until the Spanish-American War necessitated further increases. Concurrently, taxes were levied upon smoking and manufactured tobacco and snuff, lest the burden fall unequally upon smokers (Werner, 1922: 559).

By 1880, the tobacco taxes had largely stabilized. At that time, they accounted for 31% of total federal tax receipts, or \$38.9 million. Of this, 50% of the collections was derived from smoking and chewing tobacco, 40% from cigars and cheroots, and less than 2% from cigarettes (Heimann, 1960: 156).

Since that time, federal tax collections on tobacco products have risen almost annually. Between 1910 and 1920, they increased more than 500%, the greatest increase in any single decade. By 1970, they accounted for almost \$2.1 billion, down slightly from the two preceding years (Tobacco Tax Council, 1970: 5).

Indicative of changing patterns of consumption, the taxes on cigarettes, as a percentage of the total federal tobacco revenue jumped from 13.6% in 1910 to 51.1% in 1920. By 1970, the percentage at 97.2% far outdistanced those revenues derived from other forms of the product (Tobacco Tax Council, 1970: 5).

Excise taxes have proved profitable and easy to collect. The revenue schemes are simple on both the federal (26 U.S.C. 5701 *et seq.*) and state levels. In the past, no justification for them has been deemed necessary since Madison's protest. No elaborate licensing or state monopoly system, such as those designed to control commerce in alcohol, has ever been imposed.

In 1921, Iowa became the first state to cash in on the crop directly by taxing cigarettes. By 1930, 11 other states had adopted the revenue measure (Robert, 1949: 256).

In 1950, 40 states and the District of Columbia taxed cigarettes. The rates ranged from one cent to five cents for a pack of 20 except in Louisiana which levied an eight cent tax on cigarettes. In 1958, Montana imposed an equivalent rate.

Between 1950 and 1962, 43 of the 47 taxing states raised their rates at least once. The frequent increase in cigarette taxes narrowed the gap between the rates in low tax states and higher tax states. In the 12-year period, the median tax rate rose from three cents to six cents per pack (Federal Trade Commission, 1970: 3); the maximum rate remained at eight cents in Texas, Louisiana, Montana and New Mexico, in contrast to the two cent rate in the District of Columbia and Kentucky.

The four leading states in terms of both production and relative dependence on the crop have been North Carolina, South Carolina, Kentucky and Virginia, the latter two being the only states in the history of cigarette taxation to decrease their taxes; the reduction was only .5 cent (from three cents to two and a half cents) in 1960 and 1961, respectively.

By 1966, Oregon became the 49th state to impose tax on cigarettes; the rate was four cents per pack. Finally, in 1969 North Carolina imposed a cigarette tax—two cents.

The cigarette excise taxes continued to increase during the sixties. By 1970, the taxes ranged from North Carolina's two cents to Pennsylvania's 18 cents for a weighted average of 10.7 cents. Twenty-nine states levied taxes of 10 cents or more per pack (USDA, Tobacco Situation, 1971b: 40). Local governments superimposed further excise taxes on the state taxes, ranging from one cent to 10 cents per package (Tobacco Tax Council, 1970: iv).

By mid-1971, the range had widened further—Connecticut at 21 cents and North Carolina at two cents, the weighted average state tax being 11.1 cents (USDA, Tobacco Situation, 1971a: 7).

TOBACCO REVENUES

A peculiar relationship exists between production and revenue. In 1970, cash receipts from tobacco brought in \$11 million for Pennsylvania; tobacco farmers and cigarette taxes amassed \$194.6 million for the state. By comparison growers in North Carolina collected \$576 million while the state collected only \$13.4 million in cigarette revenues (USDA, Tobacco Situation, 1971b: 43).

The federal excise tax on a package of cigarettes currently eight cents and has remained so since

1951. The combined state and federal tax was highest in Pennsylvania; 26 cents for 20 cigarettes, which was 58.2% of the retail price. Connecticut's 24 cents and Texas's 23.5 cents were close behind; the average for the United States was 46.8%.

To the Federal and state governments today, tobacco is a financial asset. The total federal and state revenue collected from all tobacco products in 1971 amounted to over \$4.7 billion. Local governments excised the product further bringing the sum total to \$4.8 billion (USDA, Tobacco Situation, 1971b: 44).

From the years 1890 to 1930 cigarette tax collections from tobacco soared from approximately \$1 million to over \$339 million. By 1950, they exceeded \$1.2 billion.

Totals for the years 1890 to 1970 are recorded in the following chart (Tobacco Tax Council, 1970: 5):

Years	Cigarette tax collections
1890.....	\$1,100,000
1900.....	4,000,000
1910.....	7,900,000
1920.....	151,300,000
1930.....	359,800,000
1940.....	533,000,000
1950.....	1,242,800,000
1960.....	1,863,600,000
1970.....	2,036,100,000

REGULATION OF CONSUMPTION

Even as far back as the 16th century, smoking was considered to have medicinal value. Juan de Cardenas, a Spanish physician who lived in Mexico in the late 1500's, wrote that "Soldiers subject to privations, kept off cold, hunger, thirst by smoking and all the inhabitants of the hot countries of the Indies alleviate their discomforts by the smoke of this blessed and medicinal weed" (Wagner, 1971: 63-64).

During the recurrent epidemics of plague in the 17th century, it was widely believed that smokers were spared; it has been reported that men who attended the sick and accompanied the dead kept their pipes lit (Wagner, 1971: 63-64).

In 1614, one Scottish doctor praised the tobacco plant which:

Prepareth the stomach for meat; it maketh a clear voice: it maketh a sweet breath . . . in a few words it is the princess of physical plants (Gottsegen, 1940: 87).

King James disagreed strenuously, and in 1604 ordered a substantial increase in the import duty on the leaf. Smoking, he wrote in "A Counterblaste to Tobacco", is:

A custom loathsome to the eye, hateful to the nose, harmful to the brain, dangerous to the lungs, and in the black stinking fume thereof, nearest resembling the hor-

rible Stygian smoke of the pit that is bottomless (Brooks, 1952: 56, 71).

Another more passionate moralist wrote:

. . . imagine thou beheldest here a fume-sucker's wife most fearfully fuming forth very fountains of blood, howling for anguish of heart, weeping, wailing, and wringing her hands together . . . while she pitifully pleads with her husband thus: Oh husband, my husband . . . ! Why dost thou so vainly prefer a vanishing filthy fume before my permanent virtues? (Brooks, 1952: 72).

Notwithstanding such alliterative literature, the habit of smoking increased in popularity, particularly in the colonies. A French visitor observed in 1686 that:

Large quantities of it [tobacco] are used in this country, besides what they sell. Everyone smokes while working and idling. I sometimes went to hear the sermon; their churches are in the woods, and when everyone has arrived the minister and all the others smoke before going in. The preaching over, they do the same thing before parting. They have seats for that purpose. It was here I saw that everybody smokes, men, women, girls and boys from the age of seven years (Robert, 1949: 99).

It was said that even in New England, women of the colony "smoke in bed, smoke as they knead their bread, smoke whilst they're cooking" (Gottsegen, 1940: 147).

In the tobacco colonies, of course, there was no attempt to restrict consumption of tobacco. It was, after all, their economic mainstay.

Officials in the northern colonies were less enthusiastic about the habit, however. In 1632, the General Court of Massachusetts Bay took the initiative and forbade smoking in public under penalty of a fine (Tobacco Institute, Massachusetts, 1971: 17). In 1638, the proscription was expanded to prohibit anyone from smoking in any inn or public house except in his own room "so as neither the master of the house nor any of the guests there shall take offense thereat which if they do, then such person is forthwith to forebear upon paying of two shillings sixpence fine for every offense" (Werner, 1922: 100).

This law was followed by another in 1646 which prohibited smoking except on a journey of five miles or more from any town. Nor could a citizen of the colony bring a pipe or tobacco into the precincts of the court (Werner, 1922: 100), although he might smoke at "the ordinary tyme of repast comonly called dynner" (Heimann, 1960: 83).

Plymouth colony was similarly strict. In 1638, a law was passed forbidding anyone from smoking on the streets. The following year, it was decreed that jurymen might not smoke, on pain of a five shilling penalty.

In 1641, even the importation of tobacco was forbidden, although the law was repealed a year

later. A law passed in 1646 prohibited all from smoking, but exempted "soldiers in time of their training." And, finally, in 1669, it was ordered that anyone found smoking on the Sabbath within two miles of a meeting house would be fined 12 pence (Werner, 1922: 101).

The colony at New Haven, Connecticut, essayed a like series of statutes to regulate tobacco consumption. In 1646, the General Court decreed that:

No person under the age of twenty years nor any other that hath not already accustomed himself to the use thereof, shall take any tobacco, until he hath brought a certificate under the hands of [a physician] that it is usefull for him, and also, that he hath received a license from the court for the same. . . . None shall take any tobacco, publickly in the street or any open places unless on a journey of at least ten miles (Tobacco Institute, Connecticut: 20-21).

Within three years those laws were repealed (Werner, 1922: 102). However, it was further ordered in 1655 that:

No tobacco shall be taken in the streets, yards, or aboute the howses in any plantation or farme in this jurisdiction without dores, neere or aboute the towne, or in the meeting howse, or body of the trayne Souldiors, or any other place where they may doe mischief thereby, under the penalty of 84 pence a pipe for a time, wch is to goe to him that informs and prosecuts (Heimann, 1960: 83).

As a result of the regulation, snooping became a profitable undertaking. In the end, however, the laws were of no avail in suppressing tobacco.

By 1680, the governor of Connecticut recognized the significance of the leaf and reported that, "We have no need of Virginia's trade, most people planting so much Tobacco as they spend" (Heimann, 1960: 84). Indeed, by the early 18th century New England-grown tobacco was being produced in great enough quantity for both domestic consumption and export (Tobacco Institute, Connecticut: 22-23).

Tobacco was not one of the major concerns of the 18th century either before or after the Revolution. Social reform was generally secondary to political issues. By the end of the century, however Dr. Benjamin Rush had published his "Observations upon the influence of the Habitual use of Tobacco upon Health, Morals, and Property" in his collection of *Essays, Literary, Moral and Philosophical*. It appeared in 1798, and stressed the Doctor's thesis that smoking and chewing provoked drunkenness:

One of the usual effects of smoking and chewing is thirst. This thirst cannot be allayed by water, for no sedative or even insipid liquor will be relished after the mouth and throat have been exposed to the stimulus of the smoke, or juice of Tobacco. A desire of course is excited for strong drinks, and these when taken between meals soon lead to intemperance and drunkenness. One of the greatest sots I ever knew, acquired a love for ardent spirits

by swallowing cuds of Tobacco, which he did, to escape detection in the use of it. . . (Robert, 1949: 106).

There was little immediate response to Rush's dire warnings, although in the year his tract was published, Boston enacted a statute to prohibit the carrying of a lighted pipe or cigar in public streets—apparently with the intent to reduce the hazard of fire (Brooks, 1952: 245).

An anti-tobacco crusade was launched in the 19th century, although with considerably less fervor that its sister movement against alcohol. Among the leaders were Rev. George Trask who said tobacco and alcohol were Satan's twins; and the Rev. Orin Fowler, who declared in 1833: "Rum-drinking will not cease, till tobacco-chewing and tobacco smoking and snuff-taking shall cease" (Robert, 1949: 107). Another, Dr. Joel Shew, attributed delirium tremens, perverted sexuality, impotency, insanity and cancer to the effects of smoking and chewing (Brooks, 1952: 219).

The crusade waned as the pipe continued to attract adherents. From the 18th century on, the cigar too began to grow in favor, particularly after 1840. It is estimated that by 1850, the average number of cigars smoked was approximately 19 per capita. Within 10 years, the number had increased to about 26 (Gottsegen, 1940: 8-10).

Women smoked and chewed as well as the men. Indeed, Mrs. Andrew Jackson and Mrs. Zachary Taylor both smoked their pipes in the White House (Heimann, 1960: 90). And, of course, the other residents of the Capital engaged heavily in the practices of both chewing and spitting, to the extent that Charles Dickens, during his tour of the States, felt called upon to report that:

Washington may be called the headquarters of tobacco-tinctured saliva. . . . In all the public places of America, this filthy custom is recognized. In the courts of law, the judge has his spittoon, the crier his, the witness his, and the prisoner his; while the jurymen and spectators are provided for. . . . The stranger will find [the custom] in its full bloom of glory, luxuriant in all its alarming recklessness, at Washington (Brooks, 1952: 215-216).

Chewing and snuffing remained popular until the time of the Civil War. Thereafter, cigarette smoking was gradually adopted in North America, a habit indirectly acquired through the British from their Turkish and French allies during the Crimean War (Werner, 1922: 105).

By 1870, approximately 13.9 million cigarettes were smoked annually in the United States, or .36 per capita. Over the next 60 years, the number was to reach 976.91 per capita (Gottsegen, 1940: 28).

As more persons took to cigarettes, the zeal of reformers, which had ebbed during the Civil War, was renewed. Pamphlets, like those of the Tem-

perance Movement, were published, urging abstinence from smoking:

"I'll never use tobacco, no ;

It is a filthy weed ;

I'll never put it in my mouth."

Said Little Robert Reed.

"It hurts the health ; it makes bad breath ;

'Til very bad indeed.

I'll never, never use it, no !"

Said Little Robert Reed

(Brooks, 1952 : 242-243).

During the period following the Civil War and prior to the formation of the American Tobacco Company in 1890, the anti-liquor forces continued to snipe at tobacco in all forms. A reformed drinker and temperance lecturer, John B. Gough, would pull from his pocket a square of tobacco, smell it as if it were a rose, cry out "Ah you black devil, I love you" and throw it away.

The anti-tobacconists were led by Lucy Gaston, the greatest warrior in the anti-cigarette campaign who was trained in the office of the Women's Christian Temperance Union and then moved over into the anti-tobacco movement in the 1890's. Miss Gaston encouraged children to wear anti-tobacco pins or buttons and organized armies of children to sing and preach to and against their smoking elders (Wagner, 1971: 40).

"All hostility to tobacco seems nowadays to be concentrated on cigarettes," noted *Harper's Weekly*, observing the scene in 1905 (Robert, 1949: 169). It was scarcely a startling revelation. Twenty years earlier, the *New York Times* editorialized that:

A grown man has no possible excuse for thus imitating the small boy. . . . The decadence of Spain began when the Spaniards adopted cigarettes and if this pernicious habit obtains among adult Americans the ruin of the Republic is close at hand . . . (Brooks, 1952: 253).

Miss Gaston witnessed some legislation victories. Between 1895 and 1921, 14 states banned the sale of cigarettes (Neuberger, 1963: 52). Even in the city of New York it was declared unlawful for women to smoke in public (Brooks, 1952: 271). Curiously, however, the city of Boston repealed its law which prohibited smoking in public in 1880 (Gottsegen, 1940: 153).

The apparent success of the prohibitionists revived the anti-tobacconists' enthusiasm. "Prohibition is won; now for tobacco!" pledged Billy Sunday. Miss Gaston also renewed her dedication and actually announced her candidacy for the presidency of the United States in 1920 on an anti-tobacco platform.

For many anti-tobacconists, when it became apparent that the elder generation may be lost, the

war against tobacco was focused on the youth of the country. The National Education Association pledged its membership to cooperate in efforts made in the city, state and nation to safeguard the health and morals of youth from cigarette smoking to the end that high ideals for American manhood may be preserved for the coming generation (Hamilton, 1927: 168).

The National Congress of PTA, in Atlanta, Georgia, in 1926 resolved "to lend its force to the cause of eliminating throughout the United States the use of cigarettes by minors and make this a special work for the ensuing year for the good of our youth" (Hamilton, 1927: 168).

It is for these reasons that the WCTU declared an educational war against tobacco, but declined to seek prohibitory legislation (Robert, 1949: 247).

The disenchanting experience of Prohibition, the omnipresence of the tobacco industry, the need for new sources of state revenues and the prevalence and popularity of cigarette smoking combined to frustrate the anti-tobacco campaign. Cigarettes did provide a new source of revenue. Federal income from tobacco taxes soared to new heights because of increased cigarette consumption and advanced rates.

In any event, by 1927, each of the 14 states which had enacted prohibitory laws against cigarettes had repealed them (Neuberger, 1963: 52). Immediately thereafter these states imposed taxes upon the once forbidden product (Robert, 1949: 256; Federal Trade Commission, 1970: 3).

STATE REGULATION

Only those laws which forbade the sale of tobacco products to minors remain on the books, a trend set by New Jersey and Washington in 1883 (Gottsegen, 1940: 155).

All but a few statutes restricting tobacco products to minors were enacted between 1916-1920, simultaneous to the development and popularity of the domestic-blend cigarette.

All 50 states had laws banning sales to minors by 1950. Since then, Georgia, Louisiana, and Wisconsin have repealed theirs leaving 47 states plus the District of Columbia with laws prohibiting sales to minors.

The most common age of restriction for cigarettes and tobacco products today applies to persons under the age of 18. In an effort to ensure stricter enforcement 11 states have lowered the age of restriction from 21 to 15 (Tobacco Merchants Association, 1971: 1-2). In contrast to this trend, however, the California Legislature in 1971 defeated a bill to allow school smoking areas and lowering the sale to minor restrictions to 15 years old (NIC Smoking and Health, 1971: 1).

According to a Special Report released by the Tobacco Merchants Association of the United States, the liability for infractions in all states is on the vendor and donor of cigarettes. In a few states, manufacturer and persons advising or compelling the minors to smoke, or owning the premise where such behavior occurs are also liable. However, in some states the infraction does not extend to the parent or guardian. Some states penalize the minor himself and others require that he divulge his source.

Most of the statutes that prohibit the furnishing of cigarettes to minors extend the ban also to one or more other tobacco products. Only 11 states restrict the sale "only" to cigarettes. The efficacy of such statutes, in the day of the cigarette machine, is subject to substantial skepticism.

A complete listing of existing state statutes concerning possession by and sales to minors follows (Tobacco Merchants Association, 1971: 3-4):

State	Sale to minors		Use or possession	
	Prohibited	Age	Prohibited	Age
Alabama.....	Yes.....	Minor.....	No provision.....	
Alaska.....	Yes.....	Under 18.....	No provision.....	
Arizona.....	Yes.....	Minor.....	Yes ¹	Minor.
Arkansas.....	Yes ²	Under 18.....	No provision.....	
California.....	Yes ³	Under 18.....	Yes.....	(*)
Colorado.....	Yes.....	Under 16.....	No provision.....	
Connecticut.....	Yes.....	Under 16.....	No provision.....	
Delaware.....	Yes.....	Under 17.....	No provision.....	
District of Columbia.....	Yes.....	Under 16.....	No provision.....	
Florida.....	Yes.....	Minor.....	No provision.....	
Georgia.....	No provision.....		No provision.....	

See footnotes at end of table.

State	Sale to minors		Use or possession	
	Prohibited	Age	Prohibited	Age
Hawaii.....	Yes.....	Under 15.....	No provision.....	
Idaho.....	Yes.....	Under 18.....	Yes ¹	Under 18.
Illinois.....	Yes ²	Under 18.....	Yes ¹	Under 18.
Indiana.....	Yes.....	Under 16.....	Yes ¹	Under 21.
Iowa.....	Yes.....	Under 18.....	(³).....	Under 18.
Kansas.....	Yes.....	Under 18.....	Yes.....	Under 18.
Kentucky.....	Yes.....	Under 18.....	Yes.....	Under 18.
Louisiana.....	No provision.....		No provision.....	
Maine.....	Yes.....	Under 16.....	No provision.....	
Maryland.....	Yes ⁴	Under 15.....	No provision.....	
Massachusetts.....	Yes ²	Under 18.....	No provision.....	
Michigan.....	Yes.....	Under 21.....	Yes.....	Under 21.
Minnesota.....	Yes.....	Under 18.....	Yes.....	Under 18.
Mississippi.....	Yes ⁵	Under 18.....	No provision.....	
Missouri.....	Yes.....	Under 18.....	Yes.....	Under 18.
Montana.....	Yes.....	Under 18.....	No provision.....	
Nebraska.....	Yes.....	Under 18.....	Yes.....	Under 18.
Nevada.....	Yes ⁶	Under 18.....	No provision.....	
New Hampshire.....	Yes.....	Minor.....	No provision.....	
New Jersey.....	Yes.....	Under 16.....	No provision.....	
New Mexico.....	Yes ⁶	Under 18 ⁶	No provision.....	
New York.....	Yes.....	Under 18.....	No provision.....	
North Carolina.....	Yes.....	Under 17.....	No provision.....	
North Dakota.....	Yes.....	Under 21.....	Yes.....	Under 18. ⁹
Ohio.....	Yes.....	Under 18.....	No provision.....	
Oklahoma.....	Yes.....	Minor.....	(⁷).....	Minor.
Oregon.....	Yes.....	Under 18.....	Yes.....	Under 18.
Pennsylvania.....	Yes.....	Minor.....	(⁷).....	Minor.
Rhode Island.....	Yes.....	Under 16.....	Yes.....	Under 16.
South Carolina.....	Yes.....	Under 18.....	(⁷).....	Under 18.
South Dakota.....	Yes.....	Under 18.....	Yes.....	Under 18.
Tennessee.....	Yes.....	Under 18.....	No provision.....	
Texas.....	Yes ⁸	Under 16.....	No provision.....	
Utah.....	Yes.....	Under 19.....	Yes ¹	Under 19.
Vermont.....	Yes ⁶	Under 17.....	No provision.....	
Virginia.....	Yes.....	Under 18.....	No provision.....	
Washington.....	Yes.....	Under 21.....	Yes.....	Between 18 and 21. ¹
West Virginia.....	Yes.....	Under 21.....	Yes.....	Under 21.
Wisconsin.....	No provision.....		No provision.....	
Wyoming.....	Yes.....	Under 18.....	No provision.....	

¹ Includes a prohibition against the purchase of cigarettes by minors (in Illinois without written order of parent or guardian), as well as use or possession.

² If other than by parent or guardian.

³ However, inmates in State correction institutions 16 or over, with consent of parent or guardian, may be furnished tobacco and tobacco products.

⁴ Eighteen and over, in junior college, if not permitted by governing board.

⁵ Without consent of parent or guardian.

⁶ Minors smoking or in possession of cigarettes are required to give source of cigarettes; use or possession not otherwise regulated.

⁷ In addition, high school students may not smoke.

⁸ And any pupil of any school in State.

⁹ Or a minor pupil in any school.

¹⁰ Purchase or possession by misrepresentation of age a misdemeanor.

THE IMPETUS FOR FEDERAL SUMPTUARY REGULATION

The effect of smoking on health has been the subject of discussion for hundreds of years. Early participants in the tobacco controversy, beginning in the late 16th century, did not associate the use of tobacco with the production of cancers although they credited it with causing or curing nearly every other known disease.

Dr. John Hill, of London, a physician, botanist and prolific writer, first suggested the relation in 1761. In *Cautions Against the Immoderate Use of Snuff*, he reported six cases of "polypusses" related to excessive indulgence in tobacco in the form of snuff. One such "polypus" was described as a swelling in one nostril that was hard, black and adherent on a broad base. Painless at first, it later developed "all the frightful symptoms of an open cancer." Dr. Hill believed that this lesion could be fatal and placed the blame for its origin on tobacco. Dr. Hill has been noted as the first to report an association of tobacco with cancer (Redmond, 1970: 21).

In 1939, the first scientific study linking lung cancer with smoking was published. Between 1950 and 1954, 14 studies associating cigarettes and serious diseases were completed (Fritschler, 1969: 145).

At the present time, there is no government agency with clear jurisdiction over the health aspects of cigarettes. The Federal Trade Commission can act on matters of advertising and package information. The Food and Drug Administration concerns itself only with foods, drugs, solids, or liquids that are eaten or drunk. Tobacco is neither a food nor a drug under current legal definitions. Nor are cigarettes eaten or drunk; they are inhaled.

The 1890 edition of the U.S. *Pharmacopoeia*, an official listing of drugs published by the government, included tobacco. In later editions, tobacco was dropped. Former Senator Maurine Neuberger has claimed that the removal of tobacco from the *Pharmacopoeia* was the price paid to get support of tobacco-state legislators for the Food and Drug Act of 1906. The leaf was thereby removed from the jurisdiction of the FDA (Wagner, 1971: 74).

The first statement from the Public Health Service on the subject was made by its Surgeon General, Leroy F. Burney, M.D., in the *Journal of the American Medical Association* in November, 1959. The heart of this statement was that "the weight of evidence at present implicates smoking as the principal etiological factor in the increased incidence of lung cancer" (Diehl, 1969: 154).

In June, 1961, the American Cancer Society, the American Heart Association and the National Tuberculosis and Respiratory Disease Association jointly requested that a commission be appointed "to consider the responsibilities of government, of business and of voluntary agencies relative to the health hazards of cigarette smoking and to recommend a solution of this health problem that would protect the public and would interfere least with the freedom of industry and the happiness of individuals" (Diehl, 1969: 155).

On June 7, 1962, the then Surgeon General Dr. Luther Terry, announced, with the approval of the President, that he was establishing an "expert committee to undertake a comprehensive review of all data on smoking and health."

The members of this committee were respected scientists who had previously expressed no opinion about the relationship of tobacco to health. All members were approved for appointment by the tobacco industry as well as by the American Medical Association and several national health agencies. Half of the committee members were cigarette smokers.

On January 11, 1964, after some 15 months of intensive study, this Advisory Committee to the Surgeon General issued its monumental unanimous report stating that "cigarette smoking is a health hazard of sufficient importance in the United States to warrant appropriate remedial action."

The committee stated unequivocally that "cigarette smoking is causally related to lung cancer in men; the magnitude of the effect of cigarette smoking far outweighs other factors. The data for women, though less extensive, point in the same direction." Air pollution was found to be a very minor factor in the cause of the disease, far outweighed by cigarette smoking.

The death rate from heart disease, the report noted, was 70 percent higher in cigarette smoker than in nonsmokers, and although there was not enough evidence to say positively that smoking causes heart disease, there was enough to assume that it is a cause and to take action against it.

Another conclusion of great importance was that "cigarette smoking is the most important of the causes of chronic bronchitis in the United States and increases the risk of dying from chronic bronchitis and emphysema."

The report analyzed the statistical, pathological, clinical, and experimental evidence in relation to smoking and other diseases. A total of more than 4,000 published reports were studied and more than 150 investigators were personally interviewed. "The result was the most comprehensive

and authoritative report on this subject ever made" (Diehl, 1969: 156).

THE HEALTH WARNING REQUIREMENT

At the time the Surgeon General's Report was published, no statute, administrative ruling or court decision required that cigarette packaging or advertising contain any statement about the dangers to health attributable to cigarette smoking.

After Trade Regulation Rule Proceedings in March and June 1964, the Federal Trade Commission concluded that cigarette advertising was deceptive (misleading) and that advertisers had a responsibility to warn the public of the health hazards of cigarette smoking.

To accomplish this, the Commission proposed that cigarette packages state the amount of tar and nicotine in the smoke of the cigarette which the package contains and that cigarette packages and cigarette advertising carry a statement such as: "Caution: Cigarette Smoking is Dangerous to Health. It May Cause Death from Cancer and Other Diseases."

This warning was to be required on cigarette packages beginning January 1, 1965, and in cigarette advertising beginning July 1, 1965. The tobacco industry first obtained a postponement of the effective dates of this ruling and then prevailed upon Congress to vitiate the ruling by passing the Cigarette Labeling and Advertising Act, requiring all packages of cigarettes sold in this country to carry the label "Cigarette Smoking May be Hazardous to Your Health," but prohibiting the Federal Trade Commission and state and local governments from requiring any other label on cigarette packages and any warnings in cigarette advertising at least until 1969.

A *New York Times* editorial called the Cigarette Labeling and Advertising Act of 1965 "a shocking piece of special-interest legislation—a bill to protect the economic health of the tobacco industry by freeing it of proper regulation" (Cigarette Labeling and Advertising, 1965). An article in the *Atlantic Monthly* described the political maneuvering behind this legislation under the title "The Quiet Victory of the Cigarette Lobby: How It Found the Best Filter Yet—Congress" (Diehl, 1969: 162).

Public concern attending publication of the Surgeon General's report, *Smoking and Health*, and the pending FTC regulations for warnings on cigarette packages and in cigarette advertising apparently convinced the tobacco industry that some action by Congress was inevitable.

Reportedly the industry decided to accept a weak label on cigarette packages provided that the legislation would prevent any regulation of cigarette advertising. This was accomplished by inserting into the proposed law the provision precluding the FTC and all state or local governments from requiring any warning on cigarette packages other than the one approved by Congress and also preventing any warnings in cigarette advertising.

At House and Senate committee hearings, committee members friendly to the industry attempted to discredit both the Surgeon General's Report and the testimony given by the Surgeon General, the Chairman of the Federal Trade Commission, and the representatives of various medical and health organizations. The tobacco industry then presented a number of physicians who testified that they disagreed with the conclusions of the Surgeon General's Advisory Committee and that in their opinion there was no real evidence that cigarette smoking is harmful (Diehl, 1969: 162).

Although this act temporarily prevented any requirement that tar and nicotine content be indicated on cigarette packages, the Federal Trade Commission did establish a laboratory to determine the tar and nicotine content of the smoke of cigarettes on the American market, making the results of these tests available periodically to the public.

The Cigarette Labeling and Advertising Act also required that about July 1, 1967, and annually thereafter the Federal Trade Commission report to Congress concerning the effectiveness of the warning label, and upon current practices of cigarette advertising and promotion, with "recommendations for legislation that are deemed appropriate."

After an intensive study the Federal Trade Commission made a detailed report to Congress with the following summary and recommendations: "There is virtually no evidence that the warning statement on cigarette packages has had any significant effect."

Sales remained constant and the industry continued to invest hundreds of millions of dollars in advertising; \$200 million a year was being spent on radio and television alone in 1967; cigarette advertisers had become the single largest product advertisers on television accounting for about eight per cent of television advertising time (Wagner, 1971: 166).

THE FAIRNESS DOCTRINE

Another government agency had become concerned with cigarette advertising. The Federal Communications Commission is mandated to as-

sure that the airways, which belong to the public, are used in the public interest.

John F. Banzhaf, III, who has been called the "Ralph Nader of the tobacco industry" was responsible for the FCC's involvement in the cigarette advertising controversy. After viewing several cigarette commercials on television, Banzhaf concluded that "what he was seeing might be considered legally 'controversial'" (Wagner, 1971: 168). He then wrote to WCBS-TV in New York on December 1, 1966, requesting that he or some other responsible spokesman be given an opportunity to present contrasting views on the issue of the benefits and advisability of smoking.

Banzhaf's letter cited three commercials that presented the view that smoking is "socially acceptable and desirable, manly, and a necessary part of a rich full life." He asked free time roughly approximate to that spent on the promotion of the "virtues and values of smoking." CBS routinely turned down the request. He sent a second letter to CBS and submitted a formal complaint against WCBS-TV to the FCC in Washington.

The FCC, in a letter to the television station dated June 2, 1967, said programs it had broadcast dealing with the effect of smoking on health were insufficient to offset the effects of paid advertisements broadcast for a total of five to 10 minutes each broadcast day. "We hold that the fairness doctrine is applicable to such advertisements" the Commission said. They rejected Banzhaf's claim for equal time, however.

The FCC called on the station to provide free each week "a significant amount of time for the other viewpoint," thereby implementing the smoking education campaigns launched by the government under the cigarette labeling law. "This requirement will not preclude or curtail presentation by stations of cigarette advertising which they choose to carry." The FCC basically decided that it was not in the public interest for the airways to be used by radio and television to advertise cigarettes without some warning of the health hazards involved with smoking (Wagner, 1971: 169).

The FCC was deluged with requests to reconsider its action. The agency stood firm in its unanimous decision. As a result of the ruling many of the voluntary health agencies and the Public Health Service made available to the television and radio industries spot announcements and other program materials on the serious consequences to health caused by cigarette smoking.

The FCC's decision was upheld by the U.S. Court of Appeals on November 21, 1968; the court said the agency could indeed use its fairness doc-

trine to require free time for anti-smoking commercials. "The danger cigarettes may pose to health is, among others, a danger to life itself," the Court said.

As the Commission emphasized, it is a danger inherent in the normal use of the product, not one merely associated with its abuse or dependent on intervening fortuitous events. It threatens a substantial body of the population not merely a peculiarly susceptible fringe group. Moreover, the danger, though not established beyond all doubt, is documented by a compelling cumulation of statistical evidence (Wagner, 1971: 166-173).

(The cigarette manufacturers then asked the Supreme Court to review their case, but the high court turned down the request, leaving the appeals court decision standing.)

"Most observers agree that the dramatic entrance of the FCC into the smoking controversy was probably the most important single event during the three-year moratorium on requiring health warnings in cigarette advertisements imposed by Congress on the FTC" (Wagner, 1971: 175).

THE BAN ON ADVERTISING

Both the U.S. Public Health Service and Federal Trade Commission have annually reported findings to Congress since passage of the cigarette labeling law. The FTC recommended that the Act should be amended to: "Warning: Cigarette Smoking Is Dangerous to Health and May Cause Death From Cancer and Other Diseases."

Additionally, the FTC recommended legislation to require the same warning to appear in all cigarette advertisements and to require statements of tar and nicotine content on all cigarette packages and in all advertising.

Legislation to accomplish these objectives as well as the following were recommended by the FTC:

Cigarette advertising on television and radio should be barred entirely. Alternately, cigarette advertising on television and radio should be limited as to hours in which it may appear; the extent to which it may appear; and the types of programs on which it may appear;

Increased appropriations should be made to the Department of Health, Education, and Welfare for education of the public (especially young people) as to the health hazards of smoking;

Appropriations should be made for research under the direction of the National Institutes of Health on the development of less hazardous cigarettes.

"By 1969, the stage had been set for a showdown over cigarette advertising and promotion" (Wagner, 1971: 190). The U.S. Government was increasing its efforts to discourage the sale of cigarettes. Post office trucks carried posters: "100,000 Doctors Have Quit Smoking."

The Surgeon General continued to release reports about the adverse health effects of smoking.

Dr. Daniel Horn, director of the National Clearinghouse for Smoking and Health, was urging doctors to deliver antismoking appeals to patients in their offices.

Movie personalities had become involved in the American Cancer Society's campaign called I.Q. (for "I Quit") that passed out lapel buttons and dispatched public speakers around the country to discourage the habit. Doris Day, Debbie Reynolds and Lawrence Welk refused to allow tobacco companies to sponsor their TV shows.

Two ad agencies—Ogilvy and Mather and Doyle Dane Bernbach—and a few radio and television stations would not accept cigarette business. Several magazines did not accept cigarette advertising as a matter of principle: *Reader's Digest*, the *New Yorker*, and the *Saturday Review*. The *Christian Science Monitor* had never carried cigarette ads; the *Boston Globe* announced in May, 1969 that it would no longer accept such advertising "because accumulated medical evidence has indicated that cigarette smoking is hazardous to health" (Wagner, 1971: 220).

In April 1969, a few weeks before the House Interstate and Foreign Commerce Committee was scheduled to open hearings on the FTC proposals, a series of bills were introduced in the House by representatives of tobacco producing states. One such bill, H.R. 7177, co-sponsored by all eleven of North Carolina's House delegation, proposed "to establish a comprehensive Federal program to deal with cigarette labeling and advertising with respect to any relationship between smoking and health."

Identical measures were introduced under the sponsorship of congressmen from Virginia, Maryland, Kentucky, and Florida. Some accounts of the activity on Capitol Hill during this period attribute these bills to the tobacco interests' intention "to prevent strengthening of the warning label and make permanent the ban on state and Federal regulation of cigarette advertising, which was due to expire on June 30. Passage of this legislation was the best tobacco interests could have hoped for under the circumstances" (Wagner, 1971: 205).

After testimony from both sides, the House Committee approved a stiffer health warning but prohibited regulatory action on cigarette advertising for six years and in other ways generally upheld the status quo.

The Senate Commerce Committee, on December 5, 1970, voted out a bill banning cigarette commercials from the air as of January 1, 1971. The FTC was prohibited from acting on cigarette ads in newspapers and magazines until the middle of 1972. The labeling provision in the Senate bill was

weaker than that established in the House-voted measure, and the bill also precluded cigarette regulatory action by the fifty states and local governments.

In a session on December 12, a floor amendment was introduced which loosened the Committee's proposed restriction on the FTC by allowing the agency to require health warnings in advertising as of July 1, 1971. The bill also authorized the FTC to move sooner if it found that tobacco companies were switching from broadcast to print advertising so massively that it could be considered a "gross abuse." This bill also approved a new required health warning for cigarette packages—"Warning: Cigarette Smoking Is Dangerous to Your Health."

After Senate passage, the measure still had to pass a joint Senate-House Conference Committee where important differences between the two bills had to be reconciled.

The bill that emerged from conference differed only slightly from the Senate measure. The cautionary label to which the conferees agreed provides: "Warning: The Surgeon General Has Determined That Cigarette Smoking is Dangerous to Your Health." "In a final concession to the broadcasters, the conferees agreed to delay for one day the blackout of cigarette commercials from December 31, 1970, to midnight January 1, 1971. That would give them a last shower of cash from the New Year's Day football bowl games" (Wagner, 1971: 216). It was estimated that the loss to television and radio stations would amount to about \$220 million a year, or about 7.5% of their total advertising revenues.

President Nixon signed the Act on April 1, 1970.

Some observers marvel that the bill was passed "in spite of massive pressure that had been brought to bear against it and against the regulation of cigarette advertising generally, by the tobacco industry, the broadcasting industry, and the lobbyists and their political allies. This was a combination that for years had proved invincible against a counterforce of scientists and public health and public interest advocates who, armed with formidable statistics on the damage to health and life caused by cigarette smoking, had sought to protect consumers by requiring all cigarette advertising to provide adequate warnings of these dangers" (Whiteside, 1970: 58).

There are those observers, on the other hand, who do not view the ban of cigarette advertising on television and radio as such a success for the consumer. Rather, they cite the statistics on consumption in other countries to point up the fact that bans on advertising do not reduce sales.

In Czechoslovakia, for example, no direct advertising of tobacco is permitted; yet consumption increased 14% between 1953 and 1958. Advertising of foreign cigarettes was banned in 1962 in Italy; the following year sales increased 39.4% and in 1964, 11.7%. Sales increased in England after television cigarette advertisements were banned in 1965. Consumption figures for the following three years in Britain reveal increases: 112 billion cigarettes in 1965, 118 billion in 1966; and 119.1 billion in 1967 (Cigarette Advertising, 1970: 113-114).

Robert Miller, an agricultural economist in the Department of Agriculture's Economic Research Service, reports that cigarette consumption is up in every part of the world although advertising was banned in several European countries some years ago. He predicts an eventual decrease in sales during the next five years and perhaps a 12-13% decrease in tobacco consumption (Tobacco Advertising Could End, 1970: 7).

Other observers can see a *gradual* reduction in cigarette consumption as a result of a prohibition on advertising; some feel a ban on advertising merely makes it difficult to launch a new brand. Others predict that the ban will eliminate the social acceptability of the habit although consumption will not go down.

The "live dangerously novelty" has also been identified as a possible cause for gains in consumption; "such a philosophy might well be prevalent among the young, the very ones that antismoking advocates are most anxious to protect" (Cigarette Advertising, 1970: 112-113).

Another consequence of the ban on cigarette commercials was the FCC ruling that the broadcasters' obligation to air antismoking messages had ended. The stations continue to run them as public service spots; however, the volume was decreased considerably from the former 1 to 3 ratio established by the FCC. The anti-smoking forces are fearful that a decrease in these spots is harmful to their cause and may retard their efforts to reduce cigarette consumption.

On October 20, 1971, a U.S. District Court ruled that the Congressional ban on cigarette advertising is constitutional. The ruling stated that such advertising does not qualify under the First Amendment's guarantee of freedom of speech; a sharp distinction was drawn between guarantees of freedom of speech for individuals and the "limited extent" to which broadcast advertising qualifies for such protection.

The court also ruled that Congress had more than one "rational basis" for excluding cigarette ads from television and not the printed media—one being that broadcasts are the "most persua-

sive" types of advertising (Cigarette Ad Ban, 1971). Ultimately, the constitutional question will have to be decided by the United States Supreme Court.

CONSUMPTION TRENDS

Cigarette smoking is widespread in America today; 45.9% of the male population 17 years of age and over and 30.5% of females 17 and over are smokers. In 1970, about \$10.6 billion of individuals' expenditures was for cigarettes.

Data on cigarette sales and advertising has been obtained by the FTC from domestic cigarette manufacturers; the table below provides cigarette sales for the years 1963 to the present (Federal Trade Commission, 1970: 3):

TOTAL CIGARETTES SOLD		Billions
1963.....		516.5
1964.....		505.0
1965.....		521.1
1966.....		529.9
1967.....		535.8
1968.....		540.3
1969.....		527.9
1970.....		534.2

The reduction in sales in 1964 coincides with the public attention given the Report of the Surgeon General issued on January 11, 1964. Public awareness of the dangers cited in the Report was high. It was soon forgotten, for in 1965 the total number of cigarettes sold was almost 5 billion higher than the year prior to the Surgeon General's Report.

In 1969 there was another significant decline; it has been suggested that this decline is attributable to several high-visibility events and also by sales tax increases. For example, the FCC ruling was upheld in November 1968 giving impetus to the anti-smoking TV campaign; the federal government's anti-smoking campaign was in full swing during 1968-69; the public outcry was being felt by economic interests—magazines, newspapers, personalities and advertising agencies which refused sponsorship for business from tobacco companies.

There were significant state tax increases immediately prior to 1969 which probably contributed to the reduction in sales during that year. During fiscal year 1967, 15 states increased their cigarette tax rates; the average increase was 3.5 cents. The rate increase ranged from New York's, Ohio's, and Illinois' two cents to California's and Florida's seven cents. The next year, seven more states increased their cigarette taxes. The rates ranged from Massachusetts' and Vermont's two cents to Minnesota's, Rhode Island's, and Tennessee's five cents, the average increase approxi-

mately four cents (Council of State Governments, 1968: 196-197).

The ban on cigarette advertising on television and radio began on January 2, 1971, yet several calculations reflect a rise in cigarette sales during the past year. *Business Week* projections of industry sales and brand rankings show that a record 529 billion cigarettes were consumed in 1971, 1.5% more than 1970's sales (Where Cigarette Makers Spend, 1971: 56). Tobacco industry sources estimate that consumption has risen in 1971 by 1.5% to 535 billion cigarettes (Cigarette Sales Up, 1972: 3).

John C. Maxwell, tobacco analyst for Oppenheimer & Company, a brokerage firm, also reported a rise—2.3% in domestic unit sales in 1971. He relates part of the growth in cigarette consumption to the population mix—the increase in the 20-40-year age group, where smoking is heaviest. The Maxwell report suggests that the rest of this growth must be related to “government overkill, wherein many voices in Washington suggest that everything we eat or drink is harmful” (Maxwell, 1971: 1).

An industry specialist with Manufacturers Hanover Trust Company, on the other hand, attributes both the lag in sales in 1969 and the new increase to the “very effective antismoking ads on television. Since the ban, these commercials rarely appear” (Cigarette Sales Up, 1972: 3).

Another industry executive notes, “For years we have believed that the role of cigarette advertising is to attract smokers from competitive brands rather than induce nonsmokers to start smoking. We failed to convince the Federal Communications Commission of this, but it is borne out by our industry's experience since the TV ban. Within a relatively stable market, some companies have continued to gain while others lost. Some brands have increased their share of market while others have declined” (Where Cigarette Makers Spend, 1971: 56). Skeptics continue to argue that tobacco companies have also been trying to recruit new young smokers.

TOBACCO: ECONOMICS AND POLITICS

It is generally accepted that tobacco has been an extremely powerful force in American politics. Approximately 50 million smokers smoked 535 billion cigarettes in the past year. More than 100,000 employees receive \$500 million in wages annually from tobacco manufacturing companies; over 4,500 wholesalers handle the distribution of tobacco products and hundreds of thousands of merchants depend on the sale of cigarettes as a source of their income.

Cigarette companies had been spending over \$200 million per year on radio and television advertising, and since the ban, almost all of this money has been diverted to other media advertising providing many thousands of jobs in ad agencies and in the various media. Three million people from about 750,000 families receive \$1.4 billion annually for the cultivation of tobacco used in cigarettes.

Peripherally affected are those involved in producing the 40 million pounds of moisture-proof cellophane, the 70 million pounds of aluminum foil, the 27 billion printed packs, and the 2.7 billion cartons (Cigarette Advertising, 1970: 110-111; Wagner, 1971: 120; USDA, Tobacco Situation, 1971a: 29-31).

One writer, reporting on the present public policy trend, notes that “attempts to discourage smoking would affect the lives of millions of people and would have profound economic and political consequences” (Wagner, 1971: 121).

Advocates of cigarette smoking today are organized into extremely powerful groups, each having its own specific function and plentiful resources.

The Tobacco Tax Council, established in 1949, compiles data on the taxation of tobacco products by the Federal, state and local governments. The Council's annual booklet, “Cigaret Taxes in the United States” has been superseded by “The Tax Burden on Tobacco” since 1966. This pamphlet “undertakes to trace the history of tobacco taxes from the years of the Civil War down through [the present year]” (Tobacco Tax Council, 1970: iii).

The trade association promoting the welfare of the tobacco industry is the Tobacco Merchants Association of the U.S. It is composed of manufacturers, wholesalers, retailers, importers, exporters, leaf dealers, suppliers, and firms interested in the industry. Its *Bulletins* cover legislation, trends, special reports; its numerous other publications and activities seek to improve industry operations and expand outlets (e.g., international) for potential sales (Tobacco Merchants Association, 1971: 1-4).

The tobacco industry's point of view is nurtured and protected by the Tobacco Institute, a nonprofit corporation founded in 1958. Its membership includes major U.S. manufacturers of cigarettes, smoking and chewing tobacco, and snuff: The Bloch Brothers Tobacco Company, Brown & Williamson Tobacco Corporation, Conwood Corporation, G. A. Georgopulo & Company, Helme Products, Larus & Brother Company, Liggett & Myers, Lorillard, Philip Morris Incorporated, R.

J. Reynolds Industries, Scotten-Dillion Company, and United States Tobacco Company.

The Institute is financed by contributions from the large corporations according to their share of the market. The institute reports on the protobacco side of the medical story, attempting to discredit antismoking publicity, and publishes information on the historical role of tobacco, its place in the national economy, the industry itself, and the public's use of tobacco products.

The Council for Tobacco Research, created in 1953 in response to medical bulletins reporting on the hazards of smoking, processes and administers millions of research grants. "Although research money was to be awarded with no strings attached [The Council] nicely serve[s] the purpose of identifying the industry with the welfare of humanity and spreading good will through the scientific community" (Wagner, 1971: 80).

The scientific data continue to be attacked from both sides. Since 1954 a great quantity of research has been published and, in turn, disputed. For example, "the press played up the Hammond and Auerbach study and the claim that twelve beagles had developed lung cancer" from cigarettes. "The findings have subsequently been downgraded by the author to two microscopic tumors with the further revelation that two dogs in the control group also developed tumors" (Maxwell, 1971: 1).

Another area of contention has developed around the relationship between cigarette smoke itself and lung cancer. A recent paper by Dr. Geoffrey Myddelton given at the Second World Conference on Smoking and Health in London, September 20-24, 1971, compares the incidence of smoking and lung cancer in various countries. He indicates, "Japan smokes 86% as much as Britain but has only 27% of its lung cancer. Canada smokes twice as many cigarettes as the Netherlands but has only 69% as much lung cancer." He goes on to correlate the use of diesel fuel in England to lung cancer (Maxwell, 1971: 2).

From the other side, the United States Public Health Service 1972 report *The Health Consequences of Smoking* maintains that "nonsmokers as well as smokers may be harmed by cigarettes, . . . tobacco smoke in closed cars and poorly ventilated rooms can contaminate the atmosphere for everyone. . . . The chief danger is exposure to low levels of the deadly gas, carbon monoxide. Experiments with animals have shown that various concentrations of the colorless, odorless, and tasteless gas 'adversely affect' the structure and function of the heart and lungs. The implication is that this may also be true in man" (Study Says Cigarette Smoke Also May Harm Nonusers, 1972: 1).

It is estimated that at the present time one and a half to two million adults give up smoking every year. Sensing the hazards of the future, some cigarette companies sought fiscal security in diversification and substitution; tobacco manufacturers are now marketing, for example, safety razors, fertilizers, dog food, ballpoint pens, peanut butter and other non-nicotine products. By 1967, sales on non-tobacco products accounted for approximately one-third of the total sales of cigarette manufacturers.

It remains to be seen whether tobacco power will be whittled away any further in the next few years. Some feel that "the tobacco subsystem has succeeded in keeping the health question a low-priority item on the government's agenda by playing one government agency off against another. . . . This subsystem cuts across institutional lines and includes the paid representatives of tobacco-growers, marketing organizations and manufacturers. . . . Congressmen representing tobacco-growing states [are] leading members of four subcommittees, including two appropriations subcommittees and two committees in each house of Congress handling tobacco legislation. . . . Tobacco power [is] thus firmly entrenched and well supported" (Wagner, 1971: 121).

On the other hand, a strongly worded commentary by an industry spokesman cites Justice John Marshall's statement to illustrate industry's precarious position: "The power to tax involves the power to destroy." He continues with a description of the tobacco industry's present situation:

The onslaught of state and local taxes on tobacco products . . . represents a most serious threat to all segments of our industry. . . . We are now facing a calculated attempt to destroy, or at least drastically curtail, the sale of smoking products. The political and economic climate is most favorable for this attack. Smoking and health is a prime political issue in the same context as air pollution, crime in the streets, and consumerism. At the same time, local governments are verging on bankruptcy. Revenue of any sort is therefore a must. It is a tough battle, and cigarette industry is currently bearing the largest part of the attack (Regensburg, 1971: 146).

The revenues gained from tobacco tax collections are significant. Over \$2.1 billion in Federal taxes and over \$2.5 billion in state cigarette taxes were collected in Fiscal Year 1971 (Tobacco Tax Council, 1970: 4-6, 8; USDA, Tobacco Situation, 1971b: 44). Total tobacco taxes were \$4.8 billion in 1971 compared with \$1.7 billion in 1950.

In 1970 tobacco taxes accounted for 1.1% of total federal tax receipts and represented 13.8 percent of all excise taxes (USDA, Tobacco Situation, 1971b: 40). This places the tobacco tax as the seventh largest source of collection by the Federal government behind the major giants, e.g.,

income and profit taxes (both corporate and individual), employment taxes, manufacturers excise taxes, alcohol taxes, and estate and gift taxes. In terms of individual commodities it ranks behind only alcohol. Thus, federal revenue would be importantly affected if tobacco consumption were to decline.

CONCLUSION

The big question is how the Federal government plans to proceed. Six tobacco bills are now pending in Congress. One of these bills would give the Federal Trade Commission authority to set maximum permissible limits on tar and nicotine. Another would establish a graduated cigarette tax based on tar content.

The FTC is presently carrying on negotiations with the industry to come up with a "clear and conspicuous" health warning for its print advertising. It is expected that the industry, "which has been working closely with the FTC, 'will' take some 'voluntary' labeling action" (Where Cigarette Makers Spend, 1971: 57).

The industry feels the pressure; one member explains: "We are resigned to it. Over-all, . . . the industry mood is much more relaxed—now that we have this first big year behind us" (Where Cigarette Makers Spend, 1971: 57).

The public is clamoring for government action; a 1970 College Poll surveying youths 18 and older on more than 100 campuses reveals that 96% believe that smoking is dangerous to one's health (College Poll, 1971).

Further, a 1969 study on teenage (13- to 18-year-olds) smoking attitudes, motivation and habits indicates "deep teenage dissatisfaction with cigarette smoking, considerable knowledge of its ill effects, but a very exaggerated estimate of the acceptance of smoking by the adult world" (Lieberman Research, 1969: 1-20). And, a 1970 nationwide survey of teenagers revealed: "72% of non-smokers identified physicians as the one group that could persuade them not to start smoking and 42% of those who smoked said their physician's advice would influence them to stop" (Doctors, 1970: 24).

Critics of the industry claim: "The controversy about smoking and health continues largely because of the energy, time and money spent by the tobacco industry in keeping this controversy alive" (College Poll, 1971).

In September, 1935, *Fortune Magazine* published a discussion of the medical implications of smoking. It concluded that:

This much can be said: That the *possible* benefit to be derived from tobacco is always less than the *possible* harm (Robert, 1949: 256).

Official policy has never accepted this judgment. In recent years, steps have been taken to discourage smoking, although there is little conclusive evidence that consumption patterns are changing. It can be expected that official policy and alterations in individual behavior will both evolve slowly during the coming years. The socio-economic impact of a sudden change in official policy would be great, a circumstance reflecting the *momentum* of several centuries of intense commercial activity.

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II. The Legal Status of Marihuana

By Congressional mandate, the Commission was required to evaluate the efficacy of existing marihuana laws in the United States and to ascertain the scope of international control of the drug.

This chapter of the Appendix to the Commission's Report includes a comprehensive survey of existing law at every governmental level. It is divided into six parts.

Part I is devoted to international control. It includes a review of United States Treaty Obligations with regard to marihuana under The Single Convention on Narcotic Drugs of 1961, a comparative analysis of the legal control of marihuana in every country for which the information was available, and an analysis of possible changes to the international control status of the drug.

Part II is a brief summary of the legal status of marihuana under federal law—The Comprehensive Drug Abuse Prevention and Control Act of 1970.

Part III is a state-by-state summary and analysis of state law, with comparative charts.

Part IV is a review and analysis of ancillary statutory prescriptions which are sometimes used to prosecute marihuana-related activity.

Part V is a brief analysis of a sample of local ordinances which supplement state law.

Part VI is a complete analysis of an area with much broader applicability than marihuana use, but which the Commission considers a matter of some urgency—the statutory restraints on confidentiality between patient and physician regarding drug use.

I. International Control

CONTROL OF MARIHUANA UNDER THE SINGLE CONVENTION ON NARCOTIC DRUGS, 1961*

At present, the only international law regulating cannabis is the 1961 Single Convention on Narcotic Drugs (hereinafter—"Convention"). The Single Convention defines cannabis as the flowering or fruiting tops of the plant from which the resin has not been extracted. The leaves of the cannabis plant are not covered by the Convention, even though significant amounts of THC, the psychoactive ingredient, have been found to be present in the leaves. Resin which has been extracted from the leaves or from any other part of the plant is included.

*This discussion is based in part on a report submitted to the Commission by Neil L. Chayet, J. D., of Boston, Massachusetts.

Marihuana, the cannabis preparation commonly found in the United States, consists of a mixture of the stems, leaves, and tops of the plant and would be included under the Convention within the term "cannabis." Theoretically, it would be feasible to escape the Convention's requirements if only the leaves were used.

In purpose and design, the Convention aims to limit the use of cannabis and international traffic in the drug and certain other controlled drugs to medical and scientific purposes. All other traffic is outlawed by the Convention.

The Commission's interpretation of the Convention may be summarized as follows:

- (1) A party to the Convention may not affirmatively authorize the possession of cannabis for recreational or any other non-scientific or non-medical use.
- (2) Even so, a party need not impose any sanction, civil or criminal, penalizing possession for personal use.
- (3) It is arguable, however, that the Convention does require its parties at least to confiscate cannabis and cannabis resin possessed for non-medical or non-scientific purposes and to prohibit cultivation for such purposes.

Definitions

(1) *Cannabis* is defined in The Single Convention as follows: "Cannabis means the flowering or fruiting tops of the cannabis plant (excluding the seeds and leaves when not accompanied by the tops) from which the resin has not been extracted, by whatever name they may be designated."

Unlike earlier treaties, the definition of cannabis includes all tops of the plant. Previous definitions were limited to female tops because male tops were believed to contain no psychoactive ingredients. Research within the last few decades disproved this belief. It is important to stress that the seeds and leaves, when not accompanied by the tops, are excluded from the definition of cannabis under the Single Convention.¹

The Single Convention excludes from its definition of cannabis the tops of the plant from which the resin has been extracted. This exclusion is apparently based on the determination that once the resin has been extracted, the tops contain very insignificant quantities of the psychoactive ingredient.

¹It was suggested at the Plenipotentiary Conference that the leaves, unlike the tops, were not suitable for smoking "since they were green and burned very quickly if they were dried." It has been subsequently found, however, that marihuana cigarettes seized in illicit traffic do in fact contain leaves.

(2) *Cannabis Plant* is defined as any plant of the genus *cannabis*. (Article 1(b)) The plant has traditionally been referred to as *Cannabis sativa* L. and also as the "indian hemp plant;" in fact at one time it was held that *Cannabis indica* L., which grew on the Indo-Pakistani subcontinent, constituted a separate species. The definition in the Single Convention covers all forms of the cannabis plant, regardless of species or variety.

(3) *Cannabis Resin* is defined by the Single Convention as "the separated resin, whether crude or purified, obtained from the cannabis plant." The resin is found principally in the tops of the plant. The reason that cannabis resin is defined separately, even though the tops contain most of the resin, is because resin may also be obtained from the leaves, which are not covered by the Convention. However, for all intents and purposes, cannabis and cannabis resin are treated similarly by the Convention.

Classification

The Single Convention classifies the substances that it controls under four schedules. Cannabis and heroin are listed in both Schedule I and Schedule IV.

The Convention defines all substances listed in Schedules I or II as drugs, and subjects Schedule I drugs to the more rigorous controls. Schedule I drugs that are also listed under Schedule IV are designated as particularly dangerous.

Article 3, Section 5 indicates that unlike most other narcotic drugs which have legitimate medical uses especially in the area of pain relief, Schedule IV drugs are:

... particularly liable to abuse and to produce ill effects. . . . and that such liability is not offset by substantial therapeutic advantages. . . .

Schedule III includes preparations of drugs from which the component drugs are not readily recoverable.

Reclassification

The controls applicable to a particular drug or preparation depend on the schedule in which it is listed. Article 3 provides a procedure for amendment of the schedules to change the scope of control and for the deletion or addition of drugs. A drug may be added to a schedule without further ratification by the parties to the Convention.

When a drug is so added, an objecting party must control it in the manner required by the schedule to which it has been added while seeking a change in the type of controls selected by the Commission on Narcotic Drugs.

Control of Cannabis Cultivation

Cultivation of cannabis plants is limited under the Convention to cultivation for purposes of industry or horticulture (including science and medicine). Cultivators of cannabis for these purposes must comply with a system of controls promulgated by a national agency. This agency must designate the areas and plots of land where the cannabis plant is to be grown and must license the growers. The total crop must be delivered to the agency for authorized uses.

Article 22 of the Convention provides:

Whenever the prevailing conditions in the country or a territory of a party render the prohibition of the . . . cannabis plant the most suitable measure, in its opinion, for protecting the public health and welfare and preventing the diversion of drugs into the illicit traffic, the party concerned shall prohibit cultivation.

This Article is designed to deal with a difficult problem from the law enforcement point of view; that is, how does a government allow cultivation for permitted purposes and prevent some of the legally grown crop from being diverted into the illicit market? This provision allows the total prohibition of cultivation when a government concludes that it cannot otherwise suppress a significant diversion of the crops into illegal traffic.

Governments which do not produce cannabis or cannabis resin but choose rather to import the drug can establish exact quotas and control the movements of known quantities of these drugs.

Countries which actually produce the drug are in a far different position: if they permit private farmers to cultivate the plants from which the drugs are obtained, it is virtually impossible to control exactly the quantities which are harvested by individual producers. Further weakening of control takes place if they allow the sale of the crops to private wholesalers, etc.

For these reasons, the framers of the Convention concluded that total control over production and distribution must be in the hands of governmental authorities in the producing country.

Possession of Cannabis

Three provisions of the Single Convention deal specifically with the regulation of possession. These provisions require that the parties to the Convention:

- (1) not permit the possession of drugs except under legal authority (Article 4);
- (2) take such legislative and administrative measures as may be necessary to limit exclusively to medical and scientific pur-

poses the production, manufacture, export, import, distribution for trade, and use and possession of drugs (Article 33); and

- (3) adopt such measures as will ensure that cultivation, production, manufacture, extraction, preparation, possession, offering, offering for sale, distribution, purchase, sale, delivery on any terms . . . brokerage, dispatch, dispatch in transit . . . shall be punishable offenses when committed intentionally . . . (Article 36).

The history of the Convention and the circumstances of its adoption indicate that its main thrust is directed toward the regulation of traffic in illicit drugs. In view of this overall design and of the general rule for construing legislation to prohibit only the acts specifically enumerated, three propositions emerge.

First, the Convention does not require that "use" be made a punishable offense. The word "use," which is employed quite liberally elsewhere in the Convention, is omitted in the section which designates the acts for which the party is obligated to provide punitive sanctions. For this reason, although possession is included in the itemization of punishable offenses, it seems proper to conclude that the type of possession referred to is possession with intent to traffic, not possession for purposes of personal consumption.

Although a country may decide that possession for personal use should be a punishable offense, there is nothing in the Convention which requires it to do so.

Second, the Convention specifically provides that a party is expected to limit use by the institution of some type of administrative or legislative program geared to this end. Such a program, however, need not be punitive in nature, just as use need not be a punishable offense. A party could satisfy its obligations under the Convention if it attempted to discourage non-medical use by education or by providing solely for the strict control of production, cultivation, manufacture, sale, and possession with intent to sell. It might also be required to designate cannabis as contraband and to seize it wherever found.

Article 49(f) specifically envisions the eventual elimination of cannabis use even among countries who condition their accession to the Convention on the right to affirmatively permit its use temporarily. Furthermore, although not stipulating that users must have in their possession prescriptions for their use to be under lawful authority, Article

30(2) requires that suppliers only dispense substances controlled by the Convention under medical prescription or to licensed users.

Third, the parties are given a great deal of latitude in designing punishments for the acts the Convention specifically requires to be made punishable offenses. The designation of punishments was reserved to the party countries because significant differences throughout the world in moral, religious and cultural approaches to the concept of punishment make it difficult for any international document to specify penal provisions.

The Convention allows a party to distinguish serious from petty offenses, and to make the punishment suit the offense. "Imprisonment or other penalties of deprivation of liberty" are to be applied only to those offenses deemed serious by the party. Under this view, selling, while a punishable offense, need not necessarily be a serious offense. The Convention provides for maximum flexibility.

Efficacy of the Single Convention

The main impact of the Convention has been in the area of licit traffic and control of legal substances. Prior to its adoption, there was significant diversion of legally produced substances into illicit traffic. The Single Convention, and its primary predecessor, the 1925 Convention, reduced such diversion significantly. The Single Convention has had a considerable effect in the area of licit traffic but has been almost totally ineffective in the control of the illicit drug trade.

COMPARATIVE ANALYSIS OF FOREIGN LAWS

Under the Single Convention, parties have complete discretion in setting appropriate penalties for prohibited acts. It is therefore of interest that a nation's status with regard to the Single Convention is not necessarily determinative of its penalty structure. Extremely strict or relatively lenient penalties are found in both party countries and in non-party countries. Many countries, regardless of their Single Convention status, do not differentiate between the offenses of possession, sale and cultivation.

The Commission has compiled two charts to provide a comparative analysis of foreign laws. The first applies to Single Convention countries for which the laws were available. The second applies to non-party countries for which the laws were available.

SINGLE CONVENTION COUNTRIES

- | | |
|--------------------------|-----------------------|
| 1. Afghanistan | 50. Jamaica |
| 2. Algeria* | 51. Japan |
| 3. Antigua* | 52. Jordan |
| 4. Argentina | 53. Kenya |
| 5. Australia | 54. Korea, South |
| 6. Bahamas* | 55. Kuwait* |
| 7. Barbados* | 56. Lebanon |
| 8. Belgium | 57. Lesotho |
| 9. Bermuda* | 58. Malawi |
| 10. Botswana | 59. Malaysia |
| 11. Brazil | 60. Mali |
| 12. British Honduras* | 61. Mauritius* |
| 13. Brunei* | 62. Mexico |
| 14. Bulgaria | 63. Monaco |
| 15. Burma | 64. Morocco |
| 16. Byelorussian S.S.R.* | 65. Nauru* |
| 17. Cameroon | 66. Netherlands |
| 18. Canada | 67. New Zealand |
| 19. Ceylon* | 68. Niger |
| 20. Chad | 69. Nigeria |
| 21. Chile | 70. Norway |
| 22. China, Republic of | 71. Pakistan* |
| 23. Costa Rica | 72. Panama |
| 24. Cuba | 73. Peru |
| 25. Cyprus | 74. Philippines |
| 26. Czechoslovakia | 75. Poland |
| 27. Dahomey | 76. Senegal |
| 28. Denmark | 77. Seychelles* |
| 29. Dominica* | 78. South Africa |
| 30. Ecuador | 79. Spain |
| 31. Ethiopia | 80. Surinam* |
| 32. Falkland Islands* | 81. Swaziland |
| 33. Fiji* | 82. Sweden |
| 34. Finland | 83. Syria |
| 35. France | 84. Thailand |
| 36. Gabon | 85. Togo |
| 37. Gambia* | 86. Tonga* |
| 38. Ghana | 87. Trinidad & Tobago |
| 39. Gibraltar* | 88. Tunisia |
| 40. Grenada* | 89. Turkey |
| 41. Guatemala | 90. Ukrainian S.S.R.* |
| 42. Guinea | 91. U.S.S.R.* |
| 43. Guyana | 92. U.A.R. |
| 44. Holy See* | 93. United Kingdom |
| 45. Hungary | 94. United States |
| 46. India | 95. Upper Volta |
| 47. Iraq | 96. Venezuela |
| 48. Israel | 97. Vietnam, South |
| 49. Ivory Coast | 98. Yugoslavia |
| | 99. Zambia |

*Laws unavailable.

NON-SINGLE CONVENTION COUNTRIES

- | | |
|------------------------------------|-----------------------|
| 1. Aden* | 35. Luxembourg |
| 2. Albania | 36. Macao |
| 3. Andorra* | 37. Malagasy Republic |
| 4. Angola* | 38. Malta |
| 5. Austria | 39. Mauritania |
| 6. Bahrain* | 40. Mongolia* |
| 7. Bhutan* | 41. Mozambique* |
| 8. Bolivia | 42. Nepal |
| 9. Burundi | 43. New Caledonia* |
| 10. Cambodia | 44. Nicaragua |
| 11. China, Peoples'
Republic of | 45. Oman* |
| 12. Colombia | 46. Portugal |
| 13. Congo | 47. Portuguese Guinea |
| 14. Dominican Republic | 48. Portuguese Timor* |
| 15. El Salvador | 49. Qatar* |
| 16. Faeroe Islands* | 50. Reunion* |
| 17. French Guiana* | 51. Rhodesia |
| 18. French West Indies* | 52. Romania |
| 19. Germany, East* | 53. Rwanda |
| 20. Germany, West | 54. Ryukys* |
| 21. Greece | 55. San Marino |
| 22. Greenland* | 56. Saudi Arabia |
| 23. Haiti | 57. Sierra Leone |
| 24. Honduras | 58. Singapore |
| 25. Iceland | 59. Somalia |
| 26. Indonesia* | 60. Spanish Sahara* |
| 27. Iran | 61. Sudan |
| 28. Ireland | 62. Switzerland |
| 29. Italy | 63. Tanzania |
| 30. Korea, North* | 64. Uganda |
| 31. Laos | 65. Uruguay |
| 32. Liberia | 66. Vietnam, North* |
| 33. Libya* | 67. Western Samoa |
| 34. Lichtenstein* | 68. Yemen* |

SUMMARY OF FOREIGN LAWS

Since a country's status with regard to the Single Convention is not a major determinant of its legal scheme, the Commission has found it useful to consider a regional approach.

Africa

About two-thirds of the nations of Africa are operating under the Single Convention. Most African nations have relatively lenient penalties in force, ranging up to a five year maximum penalty for any offense. As a rule they do not differentiate among offenses. Cannabis is commonly found in most African nations, and, although the laws are on the books, they are not usually enforced.

*Laws not available.

Recently, law enforcement authorities have become more concerned about large-scale smuggling to western buyers.

Middle East

The Middle Eastern countries have relatively strict penalty structures, especially regarding sale and cultivation. About 80% of the area operates under the Single Convention. The situation in Turkey and the United Arab Republic, two of the more important states, is especially significant. Their penalties include banishment, hard labor, and even death, which may result from mere possession. In spite of these strict penalties, the Middle East is one of the prime hashish-producing regions of the world. Recently law enforcement efforts have been increased.

Europe

About half of the European countries are parties to the Single Convention. The penalties for marijuana offenses in these countries are relatively low, and possession is often differentiated from more serious offenses which carry higher penalties. Most European nations believe that drug traffic has increased due to the recent influx of young Americans on the Continent.

Two nations deserve special mention here. At present neither Denmark nor the Netherlands, both of which are parties to the Single Convention, punish possession for personal use. These nations have not reported any significant difficulty in enforcing their laws against sale as a result of their lenient policy with respect to possession. In fact, their respective populations have apparently been indifferent to the toleration of personal possession.

English-Speaking Countries

Cannabis use is increasing in the English-speaking nations of Canada, Great Britain, Australia, and New Zealand. The penalties fall into the middle range with lesser penalties for possession for personal use than for possession for purposes of sale. All these English-speaking nations operate under the Single Convention, and all are in the process of reevaluating their drug laws.

Caribbean Area

The small island countries of the Caribbean are fertile growth areas for cannabis. The people have a long history of use, and today it is estimated that 40-50% of adult male Jamaicans are regular users of *ganja*. Not surprisingly, there are significant penal distinctions between possession and sale in

MARIHUANA LAWS IN SINGLE CONVENTION COUNTRIES

NATION	OFFENSE	USE OR POSSESSION FOR PERSONAL USE	POSSESSION	SALE	CULTIVATION ¹	IMPORT-EXPORT ²	HIGHER PENALTY FOR SUBSEQUENT OFFENSE
Afghanistan			all penalties for these offenses are at the discretion of the judge ³				
Argentina		3 mos.-1 yr.	1-6 yrs.	1-6 yrs.	1-6 yrs.	1-6 yrs.	
Australia		s - 0-2 yrs. i - 0-10 yrs.	s - 0-2 yrs. i - 0-10 yrs.	s - 0-2 yrs. i - 0-10 yrs.	s - 0-2 yrs. i - 0-10 yrs.	s - 0-2 yrs. i - 0-10 yrs.	
Belgium		3 mos.-2 yrs.	3 mos.-2 yrs.	3 mos.-2 yrs.	3 mos.-2 yrs.	3 mos.-2 yrs.	yes
Botswana		1 mo.-2 yrs.	1 mo.-2 yrs.	1 mo.-2 yrs.	1 mo.-2 yrs.	1 mo.-2 yrs.	
Brazil		1-5 yrs.	1-5 yrs.	1-5 yrs.	1-5 yrs.	1-5 yrs.	
Bulgaria		mandatory 2 yrs.	mandatory 2 yrs.	mandatory 2 yrs.	punishable as possession	6 yrs.	yes
Burma		0-2 yrs.	0-2 yrs.	0-2 yrs.	0-2 yrs.	0-2 yrs.	yes
Cameroon		3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	yes
Canada		0-7 yrs.	0-7 yrs.	0-life	0-7 yrs.	mandatory 7 yrs.-life	yes
Chad		3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	yes
Chile		no penalty	5-20 yrs.	5-20 yrs.	5-20 yrs.	5-20 yrs.	
China, Republic Of		1-3 yrs.	6 mos.-2 yrs. or at least 7 yrs.	death or life imprisonment	death or life imprisonment	death or life imprisonment	
Costa Rica		6 mos.-1 yr.	6 mos.-1 yr.	mandatory 6 mos.-3 yrs.	6 mos.-1 yr.	6 mos.-1 yr.	
Cuba		6 mos.-2 yrs.	6 mos.-2 yrs.	1-4 yrs.	punishable as possession	punishable as sale	
Cyprus		0-10 yrs.	0-10 yrs.	0-10 yrs.	0-10 yrs.	0-10 yrs.	
Czechoslovakia		0-3 yrs.	0-3 yrs.	0-3 yrs.	0-3 yrs.	0-3 yrs.	
Dahomey		3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	yes
Denmark		no penalty	0-2 yrs.	0-6 yrs.	punishable as, possession	punishable as sale	
Ecuador		penalty not available	penalty not available	4-8 yrs.	4-8 yrs.	4-8 yrs.	
Ethiopia				all offenses punishable by not less than 3 months imprisonment			

NATION	OFFENSE USE OR POSSESSION FOR PERSONAL USE	POSSESSION	SALE	CULTIVATION	IMPORT-EXPORT	HIGHER PENALTY FOR SUBSEQUENT OFFENSE
Finland	14 days-4 yrs.	14 days-4 yrs.	14 days-4 yrs.	14 days-4 yrs.	14 days-4 yrs.	
France	2-10 yrs.	2-10 yrs.	2-10 yrs.	10-20 yrs.	10-20 yrs.	yes
Gabon	6 mos.-2 yrs.	6 mos.-2 yrs.	6 mos.-2 yrs.	6 mos.-2 yrs.	6 mos.-2 yrs.	yes
Ghana	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	yes
Guatemala	0-3 yrs.	0-3 yrs.	0-3 yrs.	0-3 yrs.	0-3 yrs.	
Guinea	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	yes
Guyana	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	
Hungary	0-1 yr.	0-1 yr.	0-1 yr.	0-1 yr.	0-1 yr.	
India	0-2 yrs.	0-2 yrs.	0-3 yrs.	0-3 yrs.	0-3 yrs.	yes
Iraq	mandatory 6 mos-5 yrs.	mandatory 6 mos.-5 yrs.	mandatory 6 mos.-5 yrs.	mandatory 6 mos.-5 yrs.	mandatory 6 mos.-5 yrs.	
Israel	m - 0-2 yrs. s - 0-4 yrs. i - 0-10 yrs.	m - 0-2 yrs. s - 0-4 yrs. i - 0-10 yrs.	m - 0-2 yrs. s - 0-4 yrs. i - 0-10 yrs.	m - 0-2 yrs. s - 0-4 yrs. i - 0-10 yrs.	m - 0-2 yrs. s - 0-4 yrs. i - 0-10 yrs.	
Ivory Coast	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	yes
Jamaica	18 mos.-3 yrs.	18 mos.-3 yrs.	5-7 yrs.	5-7 yrs.	5-7 yrs.	yes
Japan	0-5 yrs.	0-5 yrs.	0-5 yrs.	0-7 yrs.	0-7 yrs.	
Jordan	0-3 yrs.	0-3 yrs.	0-3 yrs.	0-3 yrs.	0-3 yrs.	
Kenya	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	
Korea, South	0-5 yrs.	under 100 g - 3 yrs.-life over 100 g - death	under 100 g - 3 yrs.-life over 100 g - death	under 100 g - 3 yrs.-life over 100 g - death	under 100 g - 3 yrs.-life over 100 g - death	yes
Lebanon	0-6 mos.	0-6 mos.	6 mos.-3 yrs.	6 mos.-3 yrs.	6 mos.-3 yrs.	
Lesotho	0-3 yrs.	0-3 yrs.	0-3 yrs.	0-3 yrs.	0-3 yrs.	
Malawi	0-10 yrs.	0-10 yrs.	0-10 yrs.	0-10 yrs.	0-10 yrs.	
Malaysia	0-2 yrs.	0-5 yrs.	0-5 yrs.	0-5 yrs.	0-5 yrs.	
Mali	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	yes
Mexico	3-12 yrs.	3-12 yrs.	3-12 yrs.	2-9 yrs.	3-12 yrs.	

NATION	OFFENSE USE OR POSSESSION FOR PERSONAL USE	POSSESSION	SALE	CULTIVATION	IMPORT-EXPORT	HIGHER PENALTY FOR SUBSEQUENT OFFENSE
Monaco	3 mos.-2 yrs.	3 mos.-2 yrs.	3 mos.-2 yrs.	3 mos.-2 yrs.	3 mos.-2 yrs.	yes
Morocco	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	6 mos.-10 yrs.	3 mos.-5 yrs.	
Netherlands	no penalty	0-4 yrs.	0-4 yrs.	0-4 yrs.	0-4 yrs.	
New Zealand	0-3 mos.	0-3 mos. (simple) 0-14 yrs. (with intent)	0-14 yrs.	0-14 yrs.	0-14 yrs.	
Niger	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	yes
Nigeria	not less than 10 yrs.	not less than 10 yrs.	not less than 15 yrs. <u>OR</u> death	not less than 21 yrs. <u>OR</u> death	not less than 10 yrs. <u>OR</u> death	
Norway	0-2 yrs.	0-2 yrs. (simple) 0-6 yrs. (with intent)	0-6 yrs.	punishable as possession	0-6 yrs.	
Panama	treatment in health facility	1-3 yrs.	5-8 yrs.	5-10 yrs.	punishable as sale	yes
Peru	2-15 yrs.	2-15 yrs.	2-15 yrs.	2-15 yrs.	2-15 yrs.	
Philippines	0-5 yrs.	0-5 yrs.	0-5 yrs.	0-5 yrs.	0-5 yrs.	yes
Poland	0-1 yr.	0-5 yrs.	0-5 yrs.	0-5 yrs.	0-5 yrs.	
Senegal	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	yes
South Africa	0-6 mos.	0-5 yrs.	0-5 yrs.	0-5 yrs.	0-5 yrs.	yes
Spain	6 mos.-6 yrs.	6 mos.-6 yrs.	6 mos.-6 yrs.	6 mos.-6 yrs.	6 mos.-6 yrs.	
Swaziland	0-3 yrs.	0-3 yrs.	0-3 yrs.	0-3 yrs.	0-3 yrs.	
Sweden	minor offense - fine offense - 0-2 yrs. serious offense - 1-6 yrs.	minor offense - fine offense - 0-2 yrs. serious offense - 1-6 yrs.	minor offense - fine offense - 0-2 yrs. serious offense - 1-6 yrs.	minor offense - fine offense - 0-2 yrs. serious offense - 1-6 yrs.	6 mos.-4 yrs.	
Syria	0-life	0-life	0-life	0-life	life	yes
Thailand	6 mos.-10 yrs.	3 mos.-5 yrs.	6 mos.-10 yrs.	6 mos.-10 yrs.	6 mos.-10 yrs.	
Togo	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	yes

NATION	OFFENSE	USE OR POSSESSION FOR PERSONAL USE	POSSESSION	SALE	CULTIVATION	IMPORT-EXPORT	HIGHER PENALTY FOR SUBSEQUENT OFFENSE
Trinidad & Tobago	s - 6 mos.-18 mos. i - 6 mos.-7 yrs.	s - 6 mos.- 18 mos. i - 6 mos.-7 yrs.	s - 6 mos.- 18 mos. i - 6 mos.-7 yrs.	mandatory 14 yrs.	s - mandatory 18 mos. i - mandatory 7 yrs.	punishable as sale	
Tunisia	1-5 yrs.	1-5 yrs.	1-5 yrs.	1-5 yrs.	1-5 yrs.	1-5 yrs.	
Turkey	3-5 yrs.	not less than 5 yrs. + 2-5 yrs. banishment	not less than 5 yrs. + 2-5 yrs. banishment	not less than 5 yrs. + 2-5 yrs. banishment	not less than 10 yrs. + 3-5 yrs. banishment	not less than 10 yrs. + 3-5 yrs. banishment	yes
U.A.R.	imprisonment	death or a term of hard labor	death or a term of hard labor	death or a term of hard labor	death or a term of hard labor	death or a term of hard labor	yes
United Kingdom	s - 6 mos. i - 5 yrs.	s - 1 yr. i - 14 yrs.	s - 1 yr. i - 14 yrs.	s - 1 yr. i - 14 yrs.	s - 1 yr. i - 14 yrs.	s - 1 yr. i - 14 yrs.	
Upper Volta	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	yes
Venezuela	4-8 yrs.	4-8 yrs.	4-8 yrs.	4-8 yrs.	4-8 yrs.	punishable as sale	
Vietnam, South	3 mos.-2 yrs.	3 mos.-2 yrs.	3 mos.-2 yrs.	3 mos.-2 yrs.	3 mos.-2 yrs.	3 mos.-2 yrs.	
Yugoslavia	0-30 days	0-30 days	0-30 days	3 mos.-5 yrs.	fine	punishable as sale	
Zambia	0-3 yrs.	0-3 yrs.	0-3 yrs.	0-3 yrs.	0-3 yrs.	0-3 yrs.	

NOTES: s = summary offense
i = indicted offense
m = magistrate's offense

- 1 Where a country does not specify by law that cultivation is an offense, the law has been interpreted to punish cultivation in the same manner as it does possession.
- 2 Where the laws of a country do not specify that importing or exporting is an offense they have been interpreted to punish importing or exporting as they do sale.
- 3 Almost all countries impose fines as well as penal sanctions. In some cases these fines are in addition to incarceration, and in others fines are an alternative penalty for the sentencing authority.

MARIHUANA LAWS IN NON-SINGLE CONVENTION COUNTRIES

NATION	OFFENSES USE OR POSSESSION FOR PERSONAL USE	POSSESSION	SALE	CULTIVATION ¹	IMPORT-EXPORT ²	HIGHER PENALTY FOR SUBSEQUENT OFFENSE
Albania	0-1 yr.	0-1 yr.	0-1 yr.	0-2 yrs. ³	0-1 yr.	yes
Austria	1 wk.-6 mos.	1 wk.-6 mos.	1-5 yrs.	1-5 yrs.	1-5 yrs.	yes
Bolivia	3-5 yrs.	3-5 yrs.	3-10 yrs.	3-10 yrs.	3-10 yrs.	no suspension or parole, even for first offense
Burundi	15 days-1 yr.	15 days-1 yr.	15 days-1 yr.	15 days-1 yr.	15 days-1 yr.	
Cambodia	6 days-1 mo.	6 days-1 mo.	6 days-1 mo.	6 days-1 mo.	6 days-1 mo.	yes
China, Peoples' Rep. of	3 yrs.-death	3 yrs.-death	3 yrs.-death	3 yrs.-death	3 yrs.-death	
Colombia	6 mos.-5 yrs.	6 mos.-5 yrs.	6 mos.-5 yrs.	6 mos.-5 yrs.	punishable as sale	
Congo	15 days-1 yr.	15 days-1 yr.	15 days-1 yr.	15 days-1 yr.	15 days-1 yr.	
Dominican Republic	10 days-1 yr.	10 days-1 yr.	3-10 yrs.	punishable as possession	3-10 yrs.	
El Salvador	8 yrs.	8 yrs.	8 yrs.	8 yrs.	8 yrs.	
Germany, West	0-3 yrs.	0-3 yrs.	0-3 yrs.	0-3 yrs.	0-3 yrs.	
Greece	6 mos.	0-10 yrs.	0-10 yrs.	0-10 yrs.	0-10 yrs.	yes
Haiti	8 days-6 mos.	8 days-6 mos.	8 days-6 mos.	punishable as possession	8 days-6 mos.	yes
Honduras	penalty not available	penalty not available	penalty not available	1-2 yrs.	penalty not available	
Iceland	discretionary imprisonment	discretionary imprisonment	discretionary imprisonment	discretionary imprisonment	discretionary imprisonment	
Iran	6 mos.-3 yrs.	6 mos.-3 yrs.	3-15 yrs.	3-15 yrs.	3-15 yrs.	yes
Ireland	s - 0-6 mos. i - 0-5 yrs.	s - 0-6 mos. i - 0-5 yrs.	s - 0-6 mos. i - 0-5 yrs.	s - 0-6 mos. i - 0-5 yrs.	s - 0-6 mos. i - 0-5 yrs.	
Italy	3-8 yrs.	3-8 yrs.	3-8 yrs.	6 mos.-2 yrs.	3-8 yrs.	
Laos	3 mos.-2 yrs.	3 mos.-2 yrs.	3 mos.-2 yrs.	punishable as possession	3 mos.-2 yrs.	yes

NATION	OFFENSES USE OR POSSESSION FOR PERSONAL USE			SALE	CULTIVATION	IMPORT-EXPORT	HIGHER PENALTY FOR SUBSEQUENT OFFENSE
	USE	POSSESSION	POSSESSION				
Liberia	6 mos.-2 yrs.	6 mos.-2 yrs.	6 mos.-2 yrs.	6 mos.-2 yrs.	6 mos.-2 yrs.	6 mos.-2 yrs.	
Luxembourg	8 days-3 mos.	8 days-3 mos.	8 days-3 mos.	8 days-3 mos.	8 days-3 mos.	8 days-3 mos.	yes
Macao	6 mos.-1 yr.	6 mos.-2 yrs.	6 mos.-2 yrs.	2-8 yrs.	8-12 yrs.	punishable as sale	
Malagasy Republic	6 mos.-5 yrs.	6 mos.-5 yrs.	6 mos.-5 yrs.	6 mos.-5 yrs.	6 mos.-5 yrs.	6 mos.-5 yrs.	
Malta	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	
Mauritania	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	3 mos.-5 yrs.	
Nepal	legal	legal	legal	(without license) 0-2 yrs.	(without license) 0-2 yrs.	penalty not available	yes
Nicaragua	5 yrs.	5 yrs.	5 yrs.	5 yrs.	5 yrs.	5 yrs.	
Portugal	6 mos.-1 yr.	6 mos.-2 yrs.	6 mos.-2 yrs.	2-8 yrs.	8-12 yrs.	punishable as sale	
Portugese Guinea	6 mos.-1 yr.	6 mos.-1 yr.	6 mos.-1 yr.	2-8 yrs.	8-12 yrs.	punishable as sale	
Rhodesia	0-10 yrs.	0-10 yrs.	0-10 yrs.	0-10 yrs.	0-10 yrs.	punishable as sale	
Romania	6 mos.-5 yrs.	6 mos.-5 yrs.	6 mos.-5 yrs.	6 mos.-5 yrs.	6 mos.-5 yrs.	punishable as sale	
Rwanda	15 days-1 yr.	15 days-1 yr.	15 days-1 yr.	15 days-1 yr.	15 days-1 yr.	15 days-1 yr.	
San Marino	3-8 yrs.	3-8 yrs.	3-8 yrs.	3-8 yrs.	6 mos.-2 yrs.	punishable as sale	
Saudi Arabia	2 yrs.	5 yrs.	5 yrs.	5 yrs.	punishable as possession	7-15 yrs.	
Sierra Leone	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	
Singapore	0-1 yr.	0-5 yrs.	0-5 yrs.	0-5 yrs.	0-5 yrs.	0-5 yrs.	
Somalia	6 mos.-2 yrs.	1-3 yrs.	1-3 yrs.	1-3 yrs.	punishable as possession	punishable as sale	
Sudan	0-7 yrs.	0-7 yrs.	0-7 yrs.	0-7 yrs.	0-7 yrs.	punishable as sale	yes
Switzerland	0-5 yrs.	0-5 yrs.	0-5 yrs.	0-5 yrs.	0-5 yrs.	punishable as sale	

-3-

NATION	OFFENSES USE OR POSSESSION FOR PERSONAL USE	POSSESSION	SALE	CULTIVATION	IMPORT-EXPORT	HIGHER PENALTY FOR SUBSEQUENT OFFENSE
Tanzania	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	
Uganda	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	s - 0-1 yr. i - 0-10 yrs.	
Uruguay	6 mos.-5 yrs.	6 mos.-5 yrs.	6 mos.-5 yrs.	6 mos.-5 yrs.	6 mos.-5 yrs.	yes
Western Samoa	0-7 yrs.	0-7 yrs.	0-14 yrs.	<i>punishable is possession</i>	0-2 yrs.	

NOTES: s = summary offense
i = indicted offense

- 1 Where a country does not specify by law that cultivation is an offense, the law has been interpreted to punish cultivation in the same manner as it does possession.
- 2 Where the laws of a country do not specify that importing or exporting is an offense they have been interpreted to punish importing or exporting as they do sale.
- 3 Almost all countries impose fines as well as penal sanctions. In some cases these fines are in addition to incarceration, and in others fines are an alternative penalty for the sentencing authority.

the Caribbean area. Sale penalties are usually twice as severe as those for possession.

Latin America

Central and South American nations have a history of association with cannabis. For a long time use of cannabis was a lower class phenomenon, but recently it has spread to the children of the middle and upper classes. This is similar to the American experience. Penalties for marihuana offenses in these countries cover the entire spectrum, but enforcement is haphazard.

Marihuana is often a cash crop, and Mexico and Panama are two principal points of origin for marihuana smuggled into the United States. About half of these countries are parties to the Single Convention.

Asia

Most of the countries of Asia operate under the Single Convention, and provide relatively strict penalties for marihuana offenses. Asia historically has been a fertile spot for drug cultivation, and in most places for use as well. Cambodia, Laos, and Nepal are not parties to the Single Convention. All three countries export cannabis, although Nepal is the only one which does not prohibit cultivation. Nepal does not prohibit possession either, and licensed individuals are permitted to sell cannabis products.

ANALYSIS OF THE POSSIBILITY OF ALTERING THE INTERNATIONAL STATUS OF CANNABIS

In view of the increasing use of marihuana in the United States and the desirability of dealing domestically with the problem of increased use in a realistic manner in terms of this nation's own enforcement objectives, the Commission has studied the possibility of changing the international status of marihuana so as to allow countries more flexibility in the domestic control of this drug.

Among the alternatives considered were the possibility of removing cannabis from the Single Convention or altering its status thereunder and the possibility of regulating cannabis under the less restrictive controls of the Convention on Psychotropic Substances of 1971.

The Psychotropic Convention, which has not yet been ratified by the United States, regulates the amphetamines, lysergic acid, and certain other dangerous non-narcotic drugs roughly approximating those covered in Schedules II, III, and

IV of the United States' Comprehensive Drug Abuse Prevention and Control Act of 1970.

Some countries which participated in drafting the Convention were of the opinion that cannabis should be included, as it was no longer considered a narcotic in scientific thinking. However, the purpose of the 1971 Convention was to regulate drugs which were not yet controlled on an international scale, and the consensus was that cannabis was adequately controlled under the Single Convention on Narcotic Drugs. Even so, there was cursory discussion, at the time, of the possibility of eventually transferring cannabis into the Psychotropic Convention.

Nevertheless, tetrahydrocannabinol (THC), a synthetic of the psychoactive ingredient in cannabis, is listed in Schedule I of this Convention as a controlled substance. Just as the delegates considering the Psychotropic Convention were confused about whether to consider cannabis, they were also uncertain whether or not THC was already controlled by the Single Convention as the principal active ingredient of a drug included therein.

After lengthy debate, the delegates decided to include THC to eliminate any question as to their intent that it be a regulated substance.

Because of their decision to include THC, there has been a recent approach to the Commission on Narcotic Drugs of the Economic and Social Council of the United Nations concerning the reclassification of cannabis; this proposal has never come to a vote.

The Objective of the Psychotropic Convention

Both the Psychotropic Convention and the Single Convention are directed toward discouraging the non-medical or non-scientific use of drugs, most of which have recognized or potential medical or scientific uses. Both Conventions are also dedicated to the elimination of illicit traffic.

That certain drugs have been included in one convention rather than in the other is not a function of the physical and psychological effects of the drugs, but rather of the historical roots of the two conventions.

A lineal descendant of earlier attempts at international control of the so-called "narcotic" drugs, the Single Convention was adopted in 1961. The opiates, cocaine, and cannabis, traditionally classified as narcotics, were the only drugs recognized at the international level as subject to widespread abuse.

In the ensuing years, it became apparent that other drugs—the psychedelics, the barbiturates, and the amphetamines—were equally susceptible

to abuse. The objective of the Conference which resulted in the Psychotropic Convention was to subject these abusable substances to international control.

Although ostensibly modeled after the Single Convention, the Psychotropic is different in respects other than the drugs covered. In contrast to the Single Convention, the Psychotropic Convention allows its adherents more flexibility in choosing a method for achieving the appropriate degree of domestic control over illegitimate use envisioned by the Convention's scheme. For example, it specifically permits drug abusers to be treated in lieu of being punished.² In addition, the Psychotropic Convention more specifically defines the parameters of legitimate use.

The Convention sets forth a two-fold scheme for controlling non-medical use and traffic in psychotropic substances. One basic set of controls applies to Schedule II, III, and IV drugs, another to Schedule I substances.

Drugs Listed in Schedules II, III, and IV

Schedules II, III, and IV contain certain amphetamines and barbiturates (of greater or lesser strength depending upon the schedule in which they are included). Article 4 states that a party may permit its nationals to carry small quantities of the drugs listed in these schedules for personal use if "lawfully obtained." Article 5 provides:

Each party shall limit by *such measures as it considers appropriate* the manufacture, export, import, distribution and stock of, trade in, use and possession of substances in Schedules II, III, and IV to medical and scientific purposes. (Emphasis added.)

The same Article affirms that it is desirable, *not required*, that parties allow possession of scheduled drugs only under "legal authority."

Article 9 suggests what is meant by legal authority. Under this Article, a party is required to see that scheduled substances are:

supplied or dispensed for use by individuals pursuant to medical prescription only, except when individuals may lawfully obtain, use, dispense or administer such substances in the duly authorized exercise of therapeutic or scientific functions.

It also urges that parties take measures to ensure that prescriptions for the substances in question are only issued in accordance with sound medical practice.

Instead of specifying the types of actions which must be made punishable (such as sale, possession,

² The United States and other countries are submitting amendments to the Single Convention in March 1972, which would introduce the alternatives of treatment and rehabilitation into its system of controls.

etc.), as did the Single Convention, Article 22 of the Convention on Psychotropic Substances only requires that a party treat as a punishable offense any action contrary to a law or regulation adopted in pursuance of its obligations thereunder. In addition, it must agree that "serious offenses" be given adequate punishment, "in particular imprisonment or deprivation of liberty."

Under the treaty a party is only obliged to establish penal sanctions for "serious offenses." What constitutes a serious offense is open to question.

In the discussion at the drafting Conference it was suggested that offenses for which a country ordinarily provided penalties in excess of one or two years in prison should be considered "serious." According to this view, a party could eliminate drug offenses commonly categorized as misdemeanors without contravening its obligations under the treaty. Similarly it is arguable that minor felonies, punishable by less than two years' imprisonment could be abolished.

In any event, for all intents and purposes, the final interpretation of what is "serious" and must be punishable by imprisonment rests with the party itself.

In addition, the Convention expressly states that a party need not employ punitive sanctions to deter conduct proscribed in accordance with its obligations if the offender is an abuser of psychotropic substances. Under Article 22:

The Parties may provide, either as an alternative to conviction or punishment, or in addition to punishment, that such abusers undergo measures of treatment, education, after-care, rehabilitation and social reintegration. . .

The Convention in no way restricts the types of offenses for which alternatives to punishment can be applied, nor does it say these alternatives are only available for non-serious offenses. However, the alternatives are only available if the offender in question is also an abuser of psychotropic substances.

The Convention does not define "abuser," but presumably a non-user who commits offenses under the Convention would not be an "abuser" and hence would not be entitled to rehabilitation or treatment instead of punishment.

To the extent that a party chooses (which it is not required to do) to prohibit non-medical possession for personal use, penal sanctions, including incarceration are not required; the language indicates that such sanctions are however necessary for "serious offenses," with the understanding that offenses such as drug trafficking are "serious."

The Convention also recognizes legal alternatives to punitive measures for handling drug use.

These measures include treatment and rehabilitation but are applicable only when the offender is also an abuser.

Drugs Listed in Schedule I

Schedule I includes LSD, Mescaline, THC, and certain other synthetic substances which presently are thought to have few medical uses but for which the discovery of such uses is anticipated. Possession of these substances is controlled under Article 7 which *requires* that a party "prohibit all use" except for "scientific and very limited medical" purposes. It also states that authorized possession of Schedule I drugs be limited to persons who have procured a license to use them for permitted purposes.

As in the case of Schedule II, III, and IV drugs, however, parties are not required to employ penal sanctions to enforce the proscription against use as long as use is not interpreted by the party to be a serious offense.

Although, in contrast to the Single Convention, possession of Schedule I drugs for personal or recreational purposes is specifically prohibited, no punishments for use need be designated. In this respect, the regulatory scheme for Schedule I drugs is similar in effect to that of the regulation of cannabis under the Single Convention.

Control of Medical Use and Research

The actual provisions for control of medical uses is set out in the Psychotropic Convention with more particularity however, than in the Single Convention.

Article 6 of the Psychotropic Convention provides that a party must establish a special agency for the disbursement and control of scheduled substances. This agency may work in conjunction with or be the same as the agency established under the Single Convention. Special licenses must be procured from or prior authorization given by this agency before possession of controlled substances will be allowed. All scientific use must take place in "establishments which are directly under the control of the government."

Under Articles 7 and 11, records concerning the circumstances of drug acquisition and details of use must be kept, as well as records of quantities manufactured or held in stock, and of each disposition that is made thereof. Under Article 15, a system for inspecting manufacturers, exporters, importers, as well as medical and scientific users, must be maintained.

The Possibility of Changing the Scope of Control

If a party or the World Health Organization has information justifying the transfer of a substance from one schedule to another or the deletion of a substance, under Article 2, it may notify the Secretary General of the United Nations, who in turn will transmit to the parties any new assessment of the substance based on its effects, potential for abuse, the danger it presents to public health or the social problem it creates.

Upon addition of a substance to the schedules, a party may give notice to the Secretary that, in view of exceptional circumstances, it is not in a position to give effect to all the relevant control provisions. The objecting party must nevertheless apply the "minimum controls" specified in the Convention, which, depending on the schedule in which the added drug is listed, include licensing manufacture and distribution, complying with export-import obligations, furnishing statistical reports, and enacting measures to repress acts contrary to the laws needed to effect these minimum controls. In contrast, when drugs are added to the Single Convention, a party must apply all the controls required for similarly scheduled drugs and subsequently seek an "exception."

Under Article 2, the United States could apply for the addition or deletion of a drug to the schedules of the Psychotropic Convention. Moreover, under Article 2, if the United States dissents from the addition of a drug to the schedules, it need not necessarily regulate its use or possession.

Recommendation of the Commission

The Commission believes that there is a compelling need to realign our internal social policy and legal structure in regard to cannabis.

The Commission also believes that the international commitments of the United States should leave this nation maximum flexibility to deal domestically with the non-medical use of cannabis in a manner consistent with this country's social policy and law enforcement objectives.

The Commission recognizes that cannabis is grown,³ as are the other plants which produce substances covered by the Single Convention, and also that cannabis has no recognized medical uses at this time.

Nonetheless, cannabis does not render its users physically dependent, and is not as incapacitating as other substances in the Single Convention; it

³ Peyote and mescaline, both of which are covered by the Psychotropic Convention, are also grown.

would be more consistent with current medical and scientific knowledge to handle marihuana in an international manner which recognizes it is not a narcotic substance. The inclusion of cannabis in Schedule IV of the Single Convention which equates it with heroin is inappropriate in view of available information as to the effects of cannabis.

Therefore, the Commission suggests that the United States adopt the position that the existing status of marihuana under the Single Convention is not appropriate. In this connection, it is recommended that representatives of the United States who have the occasion to discuss international drug controls consistently express this position.

It is further recommended, in order to encourage the countries of the world to reevaluate the international scheme for marihuana control, that the United States request WHO to reassess the dangers of cannabis use and contribute research support for this endeavor. It is hoped that on the basis of this new evidence WHO will influence the Commission on Narcotic Drugs of the United Nations to adopt diminished controls of cannabis.

Below is a series of alternative schemes for revising the applicable international documents which the Commission on Narcotic Drugs might consider:

1. Removal of cannabis from the Single Convention. This could be done by applying for an amendment of the schedules under Article 3 of the Single Convention. The procedure is the same as applying for rescheduling under Article 2 of the Psychotropic Convention. If removal of a substance from the schedules is achieved, no further regulation of the drug is required.

2. Rescheduling cannabis under the Single Convention in a new Schedule V, allowing maximum domestic flexibility, with a complementary change to Article 28, retaining such international trade controls (e.g. export-import, labelling restrictions) as are suggested by the parties.

3. Removal of cannabis from the Single Convention schedules, conditioned on controlling it in the Psychotropic Convention in a separate Schedule (V). The operative provisions for Schedule V would be drafted to maximize domestic flexibility, including the distribution of cannabis for non-medical purposes.

4. Removal of cannabis from the Single Convention and inclusion in the Psychotropic Convention in a Schedule V classification under the same controls which are operative with respect to drugs in Schedules II, III, and IV. The removal of all controls over domestic use of marihuana would be precluded but a party could seek deletion from the schedules under Article 2 at a later date.

On the basis of a tentative assessment of these alternatives, the Commission believes that if Congress should adopt the Psychotropic Convention in the near future, this nation should attempt to include cannabis in that Convention. In the coming year, the Commission will conduct a comprehensive study of international drug control and will review this tentative conclusion.

II. The Control of Marihuana Under Federal Law

The first federal law proscribing dealings in marihuana was the Marihuana Tax Act of 1937. As the title indicates, it was based upon the taxing powers of Congress. Its stated purpose was, "To impose an occupational excise tax upon certain dealers in marihuana, to impose a transfer tax upon certain dealings in marihuana, and to safeguard the revenue therefrom by registry and recording."

The Act required anyone dealing in marihuana to register with the Federal Government, maintain and file records of all transactions in marihuana, and pay a tax on these transactions. Failure to meet the requirements set forth by the legislation was punishable by a term of imprisonment of up to five years, a \$2,000 fine, or both.

Ostensibly, the Act provided a formal system for handling transactions in marihuana. In actuality, its purpose was to preclude all dealings with marihuana, except for legitimate medical use and scientific research.

The format of the Act was similar, although not identical, to that employed in The Harrison Narcotics Act of 1914. For constitutional reasons, however, the Congress chose not to amend the Harrison Act to include marihuana, but passed this separate legislation instead.

Separate legislative identity of marihuana lasted only 14 years. In the late 1940's use of narcotic drugs and marihuana increased significantly. The Federal Government responded in 1951 by passing the Boggs Act. Hoping to halt the illicit use of drugs, Congress raised penalties for all violations of the Narcotic Drug Import and Export Act (an amended version of the Harrison Act) and the Marihuana Tax Act. The amendments to these Acts added minimum mandatory sentences which escalated with subsequent offenses. A \$2,000 fine was set for all offenses as were the following terms of imprisonment:

1st offense.....	2 to 5 years.
2d offense.....	5 to 10 years.
3d and subsequent offenses.....	10 to 20 years.

By providing the same penalties for violations of the Tax Act as for violations of the narcotic drug laws under the Export Import Act, Congress followed a trend formerly established at the state level, and essentially placed these drugs in the same legislative category.

Following this same tactic, Congress passed the Narcotic Control Act of 1956 which created yet more stringent penalties applicable to marihuana offenses.

First, this Act raised the fines for all offenses to \$20,000. Illegal sale or transfer and smuggling were penalized with minimum sentences of five and 10 years for first and second offenses, respectively. Second, registration and possession offenses were made punishable by minimum mandatory terms of two years imprisonment. Lastly, importation of marihuana was made an offense. Possession was presumed to include knowledge of illegal importation, and was *prima facie* evidence of that crime.

The total number of defendants prosecuted did not substantially increase after passage of the Narcotic Control Act, but the number of defendants convicted who received prison sentences of five years or more jumped 238% for marihuana offenses and 256% for narcotic offenses between 1956 and 1958.

Following passage of the 1956 Narcotics Act, the marihuana laws went unchanged for a little over a decade until the landmark Supreme Court decision of *Leary v. United States*, 395 U.S. 6, 89 S.Ct. 1532 (1969).

The Leary case held that in order for the defendant to comply with the record-keeping requirements of the marihuana tax laws he would have to identify himself as a receiver of marihuana. Thus, the law forced him to provide the government with incriminating information against himself in violation of the Fifth Amendment.

Further, the court found that a significant portion of the marihuana illegally used in this country is of domestic origin so that the presumption that simple possession of marihuana includes knowledge of illegal importation is arbitrary and impermissible. The result of this decision, as a practical matter, was to leave the Federal Government without a marihuana possession offense.

Because the entire scheme of drug legislation rested on the taxing power, the Leary decision was one of a number of catalysts which led the Nixon Administration to propose and Congress to adopt a new legislative scheme.

The new law, the Comprehensive Drug Abuse Prevention and Control Act of 1970, was approved October 27, 1970. It discarded minimum mandatory penalties, reduced first offense possession of any drug to a misdemeanor, and firmly established that marihuana is not a narcotic, placing it in a category with hallucinogenic drugs. Recognition of the difference between marihuana and the narcotic drugs was reflected in lower penalties for other marihuana violations:

	Marihuana	Narcotics
Possession:		
1st offense.....	Conditional discharge or NMT 1 yr. a/o NMT \$5,000.	Conditional discharge or NMT 1 yr. a/o \$5,000.
2d offense.....	NMT 2 yrs a/o \$10,000.	NMT 2 yrs. a/o \$10,000.
Distribution, manufacture, possession with intent to distribute, importation and exportation:		
1st offense.....	NMT 5 yrs. a/o \$15,000—parole term 2 yrs.	NMT 15 yrs. a/o \$25,000—parole term 3 yrs.
2d offense.....	NMT 10 yrs. a/o \$30,000—parole term 4 yrs.	NMT 30 yrs. a/o \$50,000—parole term 6 yrs.

NMT=Not more than.

A particularly important innovation in the new federal law is the provision for conditional discharge. Under this provision in cases of first offense possession, a court, instead of entering a judgment of guilt, may place the defendant on probation with certain conditions for a period not to exceed one year. If the defendant violates a condition of his probation, the court may then enter an adjudication. If the conditions of probation are observed, at the expiration of its term or earlier if

the court so decides, the defendant is discharged and his case dismissed.

Discharge or dismissal does not constitute a conviction for any purpose including the application of penalties for subsequent convictions under the Act. Upon discharge and dismissal, any defendant under 21 years of age at the time of his offense may apply to the court for expungement of all official records including the record of arrest.

Insofar as a person is permitted only one con-

ditional discharge, a non-public record of these discharges is kept to determine whether given individuals are entitled to the benefits of this disposition.

Another departure in the new law is its exemption of distribution of small amounts of marihuana for no remuneration from the penalties for sale. The Act treats such casual transfers in the same manner as possession. Provision for possession treatment was made because it is customary for users of marihuana who are not dealers to transfer small amounts of the drug to their friends as a gift or at cost.

The offense of distribution to a minor without consideration is similarly treated as "possession," but sales to a minor are punishable with sentences and/or fines up to twice the amount permitted for sales to adults.

In addition to criminal prosecution for manufacturing, or other violations of the Act, injunctions will issue to suspend the prohibited conduct.

All controlled substances used contrary to law are contraband, and property used for the illegal production or conveyance of these substances is subject to seizure and forfeiture.

III. Control of Marihuana at the State Level

Since 1969, every state has made at least some change in its statutes dealing with marihuana. The changes range from passage of an entirely new law to a single reduction in the penalty for one offense. A total of 37 states and territories made changes during calendar year 1971.

The major aspect of this revision has been a reconsideration of the sanctions imposed against marihuana use, with a resulting trend toward reduced penalties. The thinking underlying this trend is perhaps best summarized in Section I of the Cannabis Control Act of Illinois, enacted on August 16, 1971:

Section 1. The General Assembly recognizes that (1) the current state of scientific and medical knowledge concerning the effects of cannabis makes it necessary to acknowledge the physical, psychological and sociological damage which is incumbent upon its use; and (2) the use of cannabis occupies the unusual position of being widely used and pervasive among the citizens of Illinois despite its harmful effects; and (3) previous legislation enacted to control or forbid the use of cannabis has often unnecessarily and unrealistically drawn a large segment of our population within the criminal justice system without succeeding in deterring the expansion of cannabis use. It is, therefore, the intent of the General Assembly, in the interest of the health and welfare of the citizens of Illinois, to establish a reasonable penalty system which is responsive to the current state of knowledge concerning cannabis

and which directs the greatest efforts of law enforcement agencies toward the commercial traffickers and large-scale purveyors of cannabis.

In many states, alteration of the marihuana laws has occurred in the context of adoption of the Uniform Controlled Substances Act, hereinafter referred to as the Uniform Act.

Like the Uniform Narcotic Drug Act drafted nearly 40 years earlier, this new Uniform Act has achieved wide acceptance by state legislatures. At present, 30 jurisdictions have enacted it, and the Act is under consideration in at least 17 other jurisdictions. The Federal Bureau of Narcotics and Dangerous Drugs has been actively seeking maximum acceptance of the Uniform Act so that state drug laws will conform in structure and emphasis to the Federal law.

With regard to marihuana, both the federal law and the Uniform Act reflect a reappraisal of the historically harsh legal scheme. Many policy-makers at both levels of government have concluded that the criminal justice system's former response to the rapid increase in the use of cannabis was neither appropriate or realistic.

Classification

✧ The Uniform Act classifies marihuana as a hallucinogen, not as a narcotic, thus bringing the law into accord with prevailing scientific opinion. State courts consistently ruled in the past that a legislative classification of marihuana as a narcotic was within the bounds of rationality, regardless of precise scientific differentiation. Now, however, only 12 jurisdictions still classify marihuana as a narcotic.

Possession

In order to be convicted of "possession" of a prohibited substance, one must have both knowledge that it is a prohibited substance and dominion and control over it. The element of knowledge may be established by an inference supported by sufficient evidence.

In some jurisdictions, "constructive" as well as actual physical possession may be sufficient for a conviction. Constructive possession is that which may be inferred from circumstances. For example, if several persons are found in a room with one lit marihuana cigarette, it may be inferred from the social circumstances that each person possessed the drug at one time.

Although the Uniform Act does not recommend specific penalties, the Comment to Section 401 does suggest that "simple possession", meaning possession for personal use as opposed to possession with intent to sell, should be classified as a misdemeanor.

This division based on the possessor's intent, places the burden on the prosecutor to prove intent to sell.

Fearing that many potential distributors would escape felony treatment under such an approach, many state legislatures have utilized statutory amounts at both ends of the scale to differentiate penalties according to the amount possessed.

For example, a specified amount might be presumed to be possessed for personal use, while a specified larger amount might be presumed to be possessed with intent to sell. Conceivably, then, a state might have several gradations of "possession" offenses, with possession of succeeding larger quantities subject to more stringent penalties.

Although we will explore each state's scheme in the following pages, we will summarize the general trend here.

Twenty-one states now have a separate misdemeanor penalty provision for possession of a small amount of marihuana. Seventeen of these 21 states retain felony penalties for possession of over that amount, requiring no showing of intent to sell.

Of the 33 jurisdictions which have not separated "possession" into two or more different categories, 24 have made *all* possession offenses (unless there is intent to sell) misdemeanors, as was recommended by the drafters of the Uniform Act. Five jurisdictions have kept possession as a felony, and four have permitted the prosecution or judiciary to determine whether possession shall be a felony or a misdemeanor.

In those jurisdictions where "possession" is still a felony, the penalties span the spectrum from one year to life imprisonment. (The normal cut-off point between felonies and misdemeanors is a sentence of one year.)

Whenever a state has chosen to apply different penalties according to the amount possessed, it has had to determine the point at which to draw the line. The states having separate penalties for possession for personal use have designated an amount as small as five grams (Florida) and as large as one pound (Nebraska, New Hampshire). The most frequent guideline set for possession for personal use is approximately one ounce (28 grams).

Interestingly, those jurisdictions that distinguish between amounts possessed often do not require that a person possessing an amount greater than the designated amount be sentenced under the higher penalty provision. The statute requires only that those in possession of *less* than the designated amount *shall* be sentenced under the lesser penalty section.

It is possible, then, for prosecutors to charge and judges to sentence under the lesser penalty if they

believe that the defendant has possessed greater than the statutorily designated amount for his own use. A problem of constitutional proportions may arise in such jurisdictions because of the possibility of unequal application of the law.

Another issue raised by the gradation of possession penalties is whether distinctions ought to be made regarding the potency of the drug. Eight states have drawn such distinctions. In two of these states, hashish is expressly excluded from the provisions reducing penalties for possession of marihuana.

In Virginia, possession of marihuana is a misdemeanor but possession of any hashish is a felony. In Minnesota, possession of up to 1.5 ounces of marihuana is a misdemeanor but possession of any amount of hashish is a felony.

Five jurisdictions have elected to designate proportionate amounts of marihuana and hashish as constituting possession for personal use.

These states and their proportions are: Indiana (25 grams of marihuana to five grams of hashish), Missouri (35 grams of marihuana to five grams of hashish), Montana (60 grams of marihuana to one gram of hashish), New Jersey (25 grams of marihuana to five grams of hashish), and South Carolina (28 grams of marihuana to 10 grams of hashish).

However, in New Mexico, although possession of eight ounces or more of marihuana is treated as a felony, possession of any amount of hashish is a misdemeanor. This incongruity was no doubt the result of major last minute changes to the original bill.

New Mexico and Virginia define hashish by statute. The six other states leave the determination that a given substance is hashish entirely to the court. Presumably, the court is to rely on testimony regarding the form and potency of the substance possessed.

These provisions have not been in effect long enough to evaluate. However, the Commission suspects that they will be difficult to apply because of the inherent variability of the potency of all cannabis products (see Part I, Chapter I).

Conditional Discharge

One of the most significant departures of the Uniform Act is its provision for conditional discharge for first offenses of possession. Section 407 provides that:

Whenever any person who has not previously been convicted of any offense under this Act or under any statute of the United States or of any State relating to narcotic drugs, marihuana, or stimulant, depressant, or hallucinogenic drugs, pleads guilty to or is found guilty of possession of a controlled substance under Section 401(c),

the court, without entering a judgment of guilt and with the consent of the accused, may defer further proceedings and place him on probation upon terms and conditions. Upon violation of a term or condition, the court may enter an adjudication of guilt and proceed as otherwise provided. Upon fulfillment of the terms and conditions, the court shall discharge the person and dismiss the proceeding against him. Discharge and dismissal under this Section shall be without adjudication of guilt and is not a conviction for purposes of disqualifications or disabilities imposed by law upon conviction of a crime, including the additional penalties imposed for second or subsequent convictions under Section 408. (There may be only one discharge and dismissal under this Section with respect to any person.)

Some 30 statutes now include some type of discretionary conditional discharge provision. The net result is that a first offense of possession is no longer an unforgivable crime. A judge may place the offender on probation for a certain period of time. If at the conclusion of this time of probation the offender has not breached the conditions of his probation, the judge can dismiss the charge against him, and there will be no record of conviction.

In addition, 13 of these jurisdictions provide for expungement of *all* records of the offense, including the arrest record. This means that no first offender who has been granted a conditional discharge will be in any way affected in the future by his single confrontation with the marihuana laws.

There are several variations within the conditional discharge concept. The most frequent provision applies solely to first offense possession, regardless of the age of the offender. A few jurisdictions limit the application of conditional discharge to those under 21 at the time of the offense, while some limit expungement of all records to those under 21, but allow conditional discharge to all first offenders for possession.

In addition, a few jurisdictions offer the option of conditional discharge for a first offense of either distribution or possession, although some of these jurisdictions limit the applicability of the provision to cases in which less than a certain amount is possessed or distributed, or require that the distribution be without remuneration.

One state, West Virginia, provides that any first offense of possession or distribution of less than 15 grams *shall* be disposed of under the conditional discharge section. Having thus made conditional discharge mandatory, West Virginia has come significantly close to decriminalization of possession for personal use and causal distribution.

Sale

Sale is usually defined by statute or judicial interpretation as delivering, dispensing, exchanging, transferring or furnishing. Some states re-

quire that consideration be involved, while others do not.

The only jurisdiction which does not classify first offense sale as a felony is the District of Columbia, where all marihuana offenses are misdemeanors. Nebraska allows the court to exercise discretion in sentencing sale as either a felony or a misdemeanor. In all other jurisdictions sale is a felony, with penalties ranging from one year to life in prison.

In 11 jurisdictions, provision is made for misdemeanor treatment of an offense known as "casual delivery" or "accommodation." This offense usually consists of delivery of a small amount of marihuana for no consideration, or without profit. It is intended to give lighter penalties to those who transfer small amounts of marihuana as favors to friends, as opposed to major traffickers who earn substantial sums from illicit sale. Of the 12 jurisdictions with "accommodation" provisions, five set amount limitations beyond which a delivery will not be considered "accommodation." The limitations range from not more than five grams to not more than 1.5 ounces. The remaining seven jurisdictions provide no guideline as to an amount which is to be considered "accommodation." The jurisdictions with accommodation provisions are: Delaware, Illinois, Iowa, Michigan, Minnesota, Missouri, New Mexico,⁴ South Carolina, Tennessee, Utah, West Virginia, and the Virgin Islands.

In four jurisdictions it is possible to receive a conditional discharge for some form of sale offense. Illinois allows it if the delivery is of less than two and one-half grams. Maryland and New Jersey allow for conditional discharge for any first offense marihuana violation of possession or sale, as does Missouri, which further requires that the offender be under 21 at the time of the offense.

Most jurisdictions treat possession with intent to sell as if it were sale. However, the statutes of 12 jurisdictions do not define possession with intent to sell as a separate offense; conversely, six jurisdictions have separate felony penalties for this offense that are slightly more lenient than those available in cases of actual sale.

Of the 27 jurisdictions that have altered their sale penalties since June of 1970, 23 have reduced those penalties. Even so, there are still eight jurisdictions which provide extremely heavy penalties for first offense sale. One who is convicted of sale in Arizona, California, Missouri, Montana or Texas may receive up to life imprisonment, and in Ohio, Rhode Island or Virginia he may receive

⁴ The New Mexico law treats sale for no remuneration as a felony, the same as sale.

up to 40 years. Of these eight states, only Missouri has an accommodation provision.

Sale to a minor is a separate offense in 42 of the 54 American jurisdictions. In the remaining 12 jurisdictions no distinction is made between sale and sale to a minor. Of the 42 jurisdictions singling out sale to a minor as a separate offense, most set the penalties at double those for sale.

There are several jurisdictions that have possible life sentences for sale to a minor, but only Missouri adds the threat of the death penalty for the first offense.

In an increasing number of jurisdictions, the offense of sale to a minor is not applicable unless the seller is over 18 years old and is selling to one at least three years his junior. This three year age differentiation is intended to recognize that not all older "sellers" are luring innocent youth. For example, a 19-year-old college student who supplied two marihuana cigarettes to his 17-year-old roommate would not be subject to a conviction for sale to a minor.

Cases like this are so common that the Uniform Act recommended inclusion of this provision, and many legislatures have accepted the recommendation.

Cultivation

Most jurisdictions punish cultivation or manufacture as heavily as they do sale. This is because the statutory emphasis is on eliminating supply and distribution.

There are various ways in which cultivation could be punished. The common definition of marihuana includes the phrase "whether growing or not." Thus, cultivation would be equivalent to possession if no separate cultivation section were enacted. This is in fact the case in two states, Alaska and Wisconsin.

The Uniform Act, however, includes the cultivation of marihuana under "manufacture," which is classified in the same penalty provision with sale.

At present, of the 54 American jurisdictions, only 14 have a more lenient penalty for cultivation than for sale. However, it should be noted that the typical definition of manufacture states "this term does *not* include the preparation or compounding of a controlled substance by an individual for his own use." Thus it is possible for the manufacture provision of the Uniform Act to be interpreted as prohibiting only cultivation for other than personal use. The question is whether "preparation or compounding" relates directly to cultivation of marihuana.

Despite this ambiguity, however, most states clearly intend to punish cultivation under the manufacture section of the statutes, thus subjecting the offense to the same penalties provided for sale.

Conclusion

There are several trends apparent from a study of state marihuana laws. First, there is a distinct tendency to separate possession from sale. A comparison of penalties for possession and sale in the various jurisdictions indicates that legislators view marihuana traffickers in a much different light than possessors. The emphasis of marihuana laws at the present time seems to be on stopping major distributors while easing up on possessors, especially those who possess small amounts. This trend is accentuated by the designation of small amounts and the inclusion of both accommodation and conditional discharge provisions in many new statutes.

The development of distinct lesser penalties for possession for personal use may foreshadow the eventual decriminalization of possession for personal use. Society's willingness to tolerate mere use, at least on the first offense, is emphasized by the proliferation of conditional discharge provisions in some recent marihuana laws, including several with expungement of all records so that no criminal past will follow the offender in later life.

Sale is still heavily penalized, but the penalties generally are not as harsh as in the past, especially for first offenses. Subsequent offenses carry harsh penalties, demonstrating the concern with which society views marihuana traffic. Sale to a minor is the most disapproved offense, and the prescribed penalties reflect strong moral condemnation.

SUMMARIES OF THE MARIHUANA LAWS OF EACH JURISDICTION

Alabama

Alabama has adopted the Uniform Controlled Substances Act, and as a result now classifies marihuana as a hallucinogen.

In keeping with the policy of the Uniform Act, Alabama also included a new offense: "possession for personal use," which was made a misdemeanor. What amount constitutes possession for personal use is within the discretion of the court. However, Alabama ignored the suggestions of the Uniform Act when it retained a simple possession offense of felony degree, with a penalty of two to 15 years, the same penalty as that for sale. The Uniform Act advises that all possession offenses be made misdemeanors.

STATE BY STATE SURVEY OF CURRENT MARIHUANA LAWS WITH PENALTIES FOR FIRST OFFENSES

State	Year of Uniform Law ¹	Classification of Marihuana ²	Conditional Discharge for First Offense Possession Available ³	Possession for Personal Use ⁴		Penalty	Possession ⁵	Sale ⁶	Cultivation	Sale to A Minor
				Relevant Amount	amount discretionary for the court					
Alabama	1971	yes	hallucinogen		amount discretionary for the court	NMT 1 yr. +/or NMT \$1,000 ⁷	2-15 yrs. +/or \$25,000	2-15 yrs. +/or \$25,000	2-15 yrs. +/or \$25,000	4-30 yrs. +/or NMT \$50,000
Alaska	1969		hallucinogen		no separate penalty	NMT 1 yr. +/or NMT \$1,000 or custody for rehabilitation	NMT 1 yr. +/or NMT \$1,000	NMT 25 yrs. +/or NMT \$20,000	no separate offense	up to life
Arizona	1969		narcotic		no separate penalty	1-10 yrs. & NMT \$50,000 OR NMT 1 yr. in county jail +/or NMT \$1,000 ⁸	1-10 yrs. & NMT \$50,000 OR NMT 1 yr. in county jail +/or NMT \$1,000	5 yrs. -life & NMT \$50,000 (parole after 3 yrs.)	1-10 yrs. & NMT \$50,000 OR NMT 1 yr. in county jail +/or NMT \$1,000	10 yrs. -life & NMT \$50,000 (parole after 5 yrs.)
Arkansas	1971	yes	hallucinogen	yes	no separate penalty	NMT 1 yr. +/or NMT \$250	NMT 1 yr. +/or NMT \$250	NMT 5 yrs. +/or NMT \$15,000	NMT 5 yrs. +/or NMT \$15,000	NMT 10 yrs. +/or NMT \$15,000
California	1970		narcotic		no separate penalty	NMT 1 yr. in county jail OR 1-10 yrs. + NMT \$20,000	NMT 1 yr. in county jail OR 1-10 yrs. + NMT \$20,000	5 yrs. -life + NMT \$20,000 (parole after 3 yrs.)	1-10 yrs. (no release until served at least 1 yr.)	10 yrs. -life + NMT \$20,000 (parole after 5 yrs.; no probation)
Colorado	1971		narcotic	yes	NMT 1/2 oz.	NMT 1 yr. +/or NMT \$500 or NMT 1 yr. probation with psychiatric treatment	2-15 yrs. + NMT \$10,000	2-15 yrs. + NMT \$10,000	2-15 yrs. + NMT \$10,000	life
Connecticut	1971		controlled drug		no separate penalty	NMT 1 yr. +/or NMT \$1,000	NMT 1 yr. +/or NMT \$1,000	5-10 yrs. + NMT \$3,000 over 1 kilo - 10-20 yrs. + NMT \$3,000	5-10 yrs. + NMT \$3,000	no separate offense
Delaware	1970		dangerous drug	yes	no separate penalty	NMT 2 yrs. + NMT \$500	NMT 2 yrs. + NMT \$500	5-10 yrs. + \$1,000 to \$10,000	NMT 5 yrs. + NMT \$3,000	7-15 yrs. + fined in discretion of court
Florida	1971		narcotic		NMT 5 g.	NMT 1 yr. or NMT \$1,000	NMT 5 yrs. +/or NMT \$5,000	NMT 10 yrs. + NMT \$10,000 (no probation)	NMT 10 yrs. + NMT \$10,000	10 yrs. -life + NMT \$10,000 (no suspension)
Georgia	1970		depressant or stimulant	yes	NMT 1 oz.	NMT 1 yr. +/or NMT \$1,000	NMT 2 yrs. +/or NMT \$2,000	NMT 2 yrs. +/or NMT \$2,000	NMT 2 yrs. +/or NMT \$2,000	NMT 5 yrs. +/or NMT \$5,000
Hawaii	1969		narcotic		no separate penalty	NMT 1 yr. OR 1-5 yrs.	NMT 1 yr. OR 1-5 yrs.	NMT 10 yrs. at hard labor + NMT \$1,000	NMT 1 yr. OR 1-5 yrs.	NMT 20 yrs. at hard labor + NMT \$1,000

State	Year of Uniform Law Act	Classification of Marihuana	Conditional Discharge for First Offense Possession			Possession for Personal Use		Penalty	Possession	Sale	Cultivation	Sale to A Minor
			Available	First Offense	Possession	Relevant Amount	no separate penalty					
Idaho	1971	yes	hallucinogen	yes			no separate penalty		NMT 6 mos. + /or NMT \$300	NMT 5 yrs. + /or NMT \$15,000	NMT 5 yrs. + /or NMT \$15,000	NMT 10 yrs. + /or NMT \$15,000
Illinois	1971	yes	marihuana	yes	2.5 g. or less 2.5 g.-10 g. 10 g.-30g.	NMT 90 days NMT 180 days NMT 1 yr.			30 g.-500 g. 1-3 yrs.; more than 500 g. 1-5 yrs.	2.5 g. or less, NMT 180 days; 2.5 g.-10g. NMT 1 yr. OR 1-2 yrs.; 10 g.-30 g., NMT 1 yr. OR 1-3 yrs.; 30 g.-500 g., 1-4 yrs.; over 500 g., 1-7 yrs.	NMT 1 yr. + /or NMT \$1,500	2.5 g. or less, NMT 360 days; 2.5 g.-10 g., NMT 2 yrs. OR 2-4 yrs.; 10 g.-30 g., NMT 2 yrs. OR 2-6 yrs.; 30 g.-500 g., 2-8 yrs.; over 500 g., 2-14 yrs.
Indiana	1971		dangerous drug		NMT 25 g. of marihuana or 5 g. of hashish	30 days-1 yr. + NMT \$500			1-10 yrs. + NMT \$1,000	1-10 yrs. + NMT \$1,000	1-10 yrs. + NMT \$1,000	no separate offense
Iowa	1971	yes	hallucinogen	yes		no separate penalty			NMT 6 mos. + /or NMT \$1,000	NMT 5 yrs. + NMT \$1,000	NMT 5 yrs. + NMT \$1,000	NMT 7-1/2 yrs. + /or NMT \$1,000
Kansas	1971		narcotic			no separate penalty			NMT 1 yr. + /or NMT \$5,000	minimum 1-3 yrs., maximum NMT 10 yrs. + /or NMT \$5,000	minimum 1-3 yrs., maximum NMT 10 yrs. + /or NMT \$5,000	no separate offense
Kentucky	1970		dangerous drug	yes		no separate penalty			treatment and rehabilitation NMT 1 yr. or NMT 6 mos. + /or NMT \$600	NMT 5 yrs. + /or NMT \$5,000	NMT 5 yrs. + /or NMT \$5,000	NMT 10 yrs. + /or NMT \$20,000
Louisiana	1970	yes	hallucinogen	yes		no separate penalty			NMT 1 yr. + /or NMT \$500	NMT 10 yrs. at hard labor + /or NMT \$15,000	NMT 10 yrs. at hard labor + /or NMT \$15,000	NMT 20 yrs. at hard labor + /or NMT \$30,000
Maine	1971		marihuana			no separate penalty			NMT 11 mos. + NMT \$1,000	NMT 5 yrs. + /or NMT \$1,000	NMT 11 mos. + NMT \$1,000	no separate offense
Maryland	1970	yes	hallucinogen	yes		no separate penalty			NMT 1 yr. + /or NMT \$1,000	NMT 5 yrs. + /or NMT \$15,000	NMT 5 yrs. + /or NMT \$15,000	no separate offense
Massachusetts	1971	yes	hallucinogen	yes		no separate penalty			NMT 6 mos. probation	NMT 2 yrs. + /or NMT \$5,000	NMT 2 yrs. + /or NMT \$5,000	no separate offense

State	Year of Uniform Law Act	Classification of Marihuana	Conditional Discharge for First Offense Possession Available	Possession for Personal Use				Sale	Cultivation	Sale to A Minor
				Relevant Amount	Penalty	Possession	Possession			
Michigan	1971	yes	yes	no separate penalty		NMT 90 days + /or NMT \$500	NMT 5 yrs. + /or NMT \$5,000	NMT 5 yrs. + /or NMT \$5,000	NMT 10 yrs. + /or NMT \$5,000	
Minnesota	1971	yes	yes	NMT 1-1/2 oz. of marihuana	NMT 1 yr. + /or NMT \$1,000	NMT 3 yrs. + /or NMT \$3,000	NMT 5 yrs. + /or NMT \$15,000	NMT 5 yrs. + /or NMT \$15,000	NMT 10 yrs. + /or NMT \$30,000	
Mississippi	1971	yes	yes	no separate penalty		NMT 6 mos. + /or NMT \$500 NMT 4 yrs. + /or NMT \$2,000 ⁹	NMT 4 yrs. + /or NMT \$2,000	NMT 4 yrs. + /or NMT \$2,000	NMT 8 yrs. + /or NMT \$2,000	
Missouri	1971	yes	yes	NMT 35 g. of mari- huana or 5 g. of hashish	NMT 1 yr. + /or NMT \$1,000	NMT 5 yrs. OR NMT 1 yr. in county jail + /or NMT \$1,000	5 yr. to life	NMT 20 yrs. in penitentiary OR 6 mos. - 1 yr. in county jail	5 yrs. to life or death	
Montana	1971	yes	yes	NMT 60 g. of mari- huana or 1 g. of hashish	NMT 1 yr. + /or NMT \$1,000	NMT 5 yrs.; if shown to be habitual user then committed to rehabilitation institution	1 yr. to life	1 yr. to life	no separate offense	
Nebraska	1971	yes	yes	NMT 1 lb.	NMT 7 days + /or NMT \$500	1 yr. in prison OR NMT 6 mos. in jail + /or NMT \$500	1-5 yrs. OR NMT 6 mos. in county jail + /or NMT \$2,000	1-5 yrs. OR NMT 6 mos. in county jail + /or NMT \$2,000	no separate offense	
Nevada	1971	yes	yes	NMT 1 oz.	1-6 yrs. + NMT \$2,000 OR NMT 1 yr. in county jail + NMT \$1,000	1-6 yrs. + NMT \$2,000	1-20 yrs. + NMT \$5,000	1-6 yrs. + NMT \$2,000	life with possible parole after 7 yrs. + NMT \$5,000	
New Hampshire	1971	yes	yes	NMT 1 lb.	NMT 1 yr. + /or NMT \$500	NMT 5 yrs. + /or NMT \$2,000	NMT 10 yrs. + /or NMT \$2,000	NMT 10 yrs. + /or NMT \$2,000	no separate offense	
New Jersey	1970	yes	yes	NMT 25 g. of mari- huana or 5 g. of hashish	NMT 6 mos. + /or NMT \$500 (A quasi-criminal non-indictable offense)	NMT 5 yrs. + /or NMT \$15,000	NMT 5 yrs. + /or NMT \$15,000	NMT 5 yrs. + /or NMT \$15,000	NMT 10 yrs. + /or NMT \$15,000	
New Mexico	1972	yes	yes	NMT 1 oz. More than 1 oz., less than 8 oz.	\$50-\$100 + NMT 15 days \$100-\$1,000 + /or NMT 1 yr.	8 oz. or more: 1-5 yrs. + /or \$5,000	1-5 yrs. + /or NMT \$5,000	10-50 yrs. + /or NMT \$10,000	2-10 yrs. + /or NMT \$5,000	

State	Year of Uniform Law Act	Classification of Marihuana	Conditional Discharge for First Offense Possession				Possession for Personal Use			Sale to A Minor
			Available	First Offense Possession	Relevant Amount	Penalty	Possession	Sale	Cultivation	
New York	1971	narcotic	yes		NMT 1/4 oz.	NMT 1 yr.	25-99 cigarettes or more than 1/4 oz.; 2-1/3-7 yrs. 100 or more cigarettes or more than 1 oz.; 5-15 yrs.	5-15 yrs.	NMT 1 yr.	8-1/3-25 yrs.
North Carolina	1971	marihuana	yes		no separate penalty		NMT 6 mos. +/or NMT \$500	NMT 5 yrs. +/or NMT \$5,000	NMT 5 yrs.	no separate offense
North Dakota	1971	hallucinogen	yes		no separate penalty		NMT \$500 +/or NMT 1 yr.	NMT 10 yrs. +/or NMT \$5,000	NMT 10 yrs.	NMT 20 yrs. +/or NMT \$5,000
Ohio	1970	hallucinogen			no separate penalty		NMT 1 yr. +/or NMT \$1,000	20-40 yrs.	2-15 yrs. + NMT \$10,000	30 yrs.-life
Oklahoma	1971	hallucinogen	yes		no separate penalty		NMT 1 yr.	2-10 yrs. + NMT \$5,000	2-10 Yrs. + NMT \$5,000	4-20 yrs. + NMT \$10,000
Oregon	1971	narcotic			NMT 1 oz.	NMT 1 yr. +/or NMT \$1,000	NMT 10 yrs. +/or NMT \$2,500	NMT 10 yrs. +/or NMT \$2,500	NMT 10 yrs. +/or NMT \$2,500	NMT 20 yrs. +/or NMT \$2,500
Pennsylvania	1970	narcotic			no separate penalty		2-5 yrs. + NMT \$2,000	minimum 5-20 yrs. + NMT \$5,000	NMT 1 yr. +/or NMT \$5,000	no separate offense
Rhode Island	1970	narcotic			no separate penalty		NMT 15 yrs. +/or NMT \$10,000	NMT 40 yrs.	NMT 20 yrs.	up to life (no probation)
South Carolina	1971	hallucinogen	yes		NMT 28 g. of marihuana or 10 g. of hashish	NMT 3 mos. +/or NMT \$100	NMT 6 mos. +/or NMT \$1,000	NMT 5 yrs. +/or NMT \$5,000	NMT 5 yrs. +/or NMT \$5,000	NMT 10 yrs. +/or NMT \$10,000
South Dakota	1971	hallucinogen	yes		NMT 1 oz.	NMT 1 yr. +/or NMT \$500	2-5 yrs. +/or NMT \$5,000	5-10 yrs. +/or NMT \$5,000	5-10 yrs. +/or NMT \$5,000	10-20 yrs. +/or NMT \$5,000
Tennessee	1971	hallucinogen	yes		no separate penalty		NMT 1 yr. +/or NMT \$1,000 or treatment in state facility	1-5 yrs. + NMT \$3,000	1-5 yrs. + NMT \$3,000	2-10 yrs. + NMT \$6,000
Texas	1971	narcotic			no separate penalty		2 yrs.-life	5 yrs.-life	2 yrs.-life	5 yrs.-life
Utah	1971	hallucinogen	yes		no separate penalty		NMT 6 mos. +/or NMT \$299	NMT 5 yrs. +/or NMT \$5,000	NMT 5 yrs. +/or NMT \$5,000	NMT 10 yrs. +/or NMT \$5,000

State	Year of Law	Uniform Act	Classification of Marihuana	Conditional Discharge for First Offense Available	Possession for Personal Use				Sale	Cultivation	Sale to A Minor
					Relevant Amount	Penalty	Possession				
Vermont	1971		regulated drug		NMT 1/2 oz.	NMT 6 mos. +/or NMT \$500	1/2 oz.-2 oz., NMT 2 yrs. +/or \$2,000; 2 or more oz., NMT 5 yrs. +/or NMT \$5,000		NMT 5 yrs. + NMT \$10,000	NMT 5 yrs. + NMT \$10,000	NMT 5 yrs. + NMT \$10,000
Virginia	1971	yes	hallucinogen		no separate penalty	separate penalty	NMT 1 yr. +/or NMT \$1,000		1-40 yrs. +/or NMT \$25,000	1-40 yrs. +/or NMT \$25,000	5-40 yrs. +/or NMT \$50,000
Washington	1971	yes	hallucinogen		NMT 40 g.	NMT 90 days +/or NMT \$250	NMT 5 yrs. +/or NMT \$10,000		NMT 5 yrs. +/or NMT \$10,000	NMT 5 yrs. +/or NMT \$10,000	NMT 10 yrs. +/or NMT \$10,000
West Virginia	1971	yes	hallucinogen	yes	NMT 15 g.	conditional discharge mandatory for first offense	90 days-6 mos. +/or NMT \$1,000		1-5 yrs. +/or NMT \$15,000	1-5 yrs. +/or NMT \$15,000	2-10 yrs. +/or NMT \$15,000
Wisconsin	1969		dangerous drug	yes	no separate penalty	separate penalty	NMT 1 yr. +/or NMT \$500		NMT 5 yrs. +/or NMT \$5,000	no separate offense	NMT 15 yrs.
Wyoming	1971	yes	hallucinogen	yes	no separate penalty	separate penalty	NMT 6 mos. + NMT \$1,000		NMT 10 yrs. +/or NMT \$10,000	NMT 6 mos. +/or NMT \$1,000	NMT 20 yrs. +/or NMT \$20,000
District of Columbia	1970		narcotic		no separate penalty	separate penalty	NMT 1 yr. +/or \$100-\$1,000		NMT 1 yr. +/or \$100-\$1,000	NMT 1 yr. +/or \$100-\$1,000	no separate offense
Guam	1970	yes	hallucinogen	yes	no separate penalty	separate penalty	NMT 1 yr. +/or NMT \$1,000		NMT 2 yrs. +/or NMT \$1,000	NMT 2 yrs. +/or NMT \$1,000	NMT 4 yrs. +/or NMT \$4,000
Puerto Rico	1971	yes	hallucinogen	yes	no separate penalty	separate penalty	1-3 yrs. +/or NMT \$5,000		5-20 yrs. +/or NMT \$20,000	5-20 yrs. +/or NMT \$20,000	10-40 yrs. +/or NMT \$40,000
Virgin Islands	1971	yes	hallucinogen	yes	no separate penalty	separate penalty	NMT 1 yr. +/or \$5,000		NMT 5 yrs. +/or NMT \$15,000	NMT 5 yrs. +/or NMT \$15,000	NMT 15 yrs. +/or NMT \$45,000

1 "Year of Law" means the last year in which the jurisdiction's marihuana laws were revised or amended in any way. This includes those jurisdictions that enacted entirely new laws, as well as those that may have only changed a penalty provision.

2 The Uniform Controlled Substances Act classifies marihuana as a hallucinogen. This is the modern trend, as most jurisdictions have come to realize that scientifically marihuana is not a narcotic.

3 Conditional discharge is designed to permit a judge to place a first offender on probation in lieu of sentencing him to prison. It is usually applicable only to cases of first offense possession, and is available only once with respect to any person. In addition, this provision calls for confidentiality of the defendant's record upon fulfillment of all the terms and conditions of his probation. This precludes any criminal record from following the individual in later life.

4 Some jurisdictions have created a separate penalty for possession of marihuana. While state laws generally do not specify their reasons

⁵In states with no special provision for possession of small amounts, the "possession" offense covers possession of any amount. In states which do have such a special provision, "possession" offense covers possession of over the specified amount. Possession does not include possession with intent to sell. This offense is usually punishable as if it were the actual offense of sale. Thus, the penalty for possession with intent to sell is the same as that for sale in 36 jurisdictions. The following 12 jurisdictions do not have a penalty for possession with intent to sell: Colorado, Florida, Georgia, Indiana, Maine, Mississippi, Missouri, Montana, Nevada, Pennsylvania, Texas, and the District of Columbia. Six other states have made possession with intent to sell a separate offense from sale: Arizona, California, New York, Ohio, Rhode Island, and Vermont.

⁶This heading may include delivery, distribution, dispensing, furnishing, transportation, trafficking or transfer according to the individual jurisdiction.

⁷"NMT" designates not more than.

⁸There are several jurisdictions that give prosecutorial and sentencing discretion as to whether a particular offender is to be treated as a felon or a misdemeanant. This is indicated on the chart by use of "OR" in the appropriate column.

⁹In the Mississippi Uniform Act, two separate penalties for possession were mistakenly included. The Mississippi Legislature is currently attempting to correct this error.

Alaska

Alaska classifies marihuana as a hallucinogen, although it has not adopted the Uniform Act. Possession of marihuana is a misdemeanor in Alaska, with a penalty of not more than one year imprisonment, or in the alternative, rehabilitative custody for a similar period when possession or control is for personal use.

Sentences handed down under this law must take into consideration a recent Alaska Supreme Court decision, *Waters v. State*, 483 P. 2d 199, 201 (1971). This decision cited with approval the President's Commission on Law Enforcement and the Administration of Justice report, *The Challenge of Crime in a Free Society*, which recommended that marihuana offenses be considered the least serious drug offenses for purposes of sentencing.

Alaska has no separate cultivation offense, but offenders are charged with possession in applicable cases. Sale carries a heavy penalty of up to 25 years.

Arizona

Arizona, which has not amended its marihuana laws since 1969, still classifies marihuana as a narcotic. Possession may either be considered a felony or a misdemeanor in the discretion of the prosecutor or the court. The sentencing authority has extremely broad discretion in cases of sale. Possible penalties for sale range from five years to life. Possession with intent to sell is a separate offense, carrying a penalty of two to 10 years.

Arkansas

Arkansas, a Uniform Act state, classifies marihuana as a hallucinogen. As recommended in the Uniform Act, possession is a misdemeanor, and conditional discharge is available for first offenders. No expungement of the record is possible, however. Sellers may receive up to five years in prison and a fine of not more than \$15,000. This is a typical sale penalty in a Uniform Act state.

California

California still classifies marihuana as a narcotic. Possession may be either a felony or misdemeanor, in the discretion of the prosecutor or the court. However, "use" and "being under the influence" are classified separately as misdemeanors, carrying sentences of 90 days to one year in the county jail.

California is one of the several states which still have the harsh first offender penalty of as much as life imprisonment for either sale or sale to a

minor. Moreover, individuals imprisoned for first offense sale may not be released until they have served at least one year of their total sentence. For first offense sale to a minor probation is not permitted, and parole is possible only after an offender has served a minimum of five years in prison.

In addition, California is one of several states which set out a separate penalty for possession with intent to sell as opposed to actual sale. Possession with intent is punishable by two to ten years imprisonment.

Colorado

Although Colorado recently amended its drug laws, it still classifies marihuana as a narcotic. The Colorado courts have ruled this classification is not a denial of equal protection of the laws because it is reasonably related to the public purpose of the statute.

Colorado has adopted the recent innovations of conditional discharge and possession for personal use of not more than one-half ounce. The misdemeanor treatment of possession for personal use is of consequence since the courts have ruled possession of even a modicum of marihuana is prohibited by the statute. *Mickens v. People*, 365 P.2d 679, 681 (1961). Simple possession is punishable as a felony, as are sale and cultivation. Sale to one under 25 is punishable by life imprisonment for the first offense and life or death for the second offense.

The statute also provides harsh penalties (10 to 20 years for the first offense) for the unusual crime of intent to induce or aid another to unlawfully use or possess narcotic drugs.

Enforcement of the Colorado drug law is facilitated by a statutory provision permitting search and seizure without issuance of a warrant upon personal knowledge or reliable information that a violation is being committed.

Connecticut

Connecticut classifies marihuana as a controlled drug.

All simple possession offenses are misdemeanors. In possession cases, the court may sentence an offender to the custody of the Commissioner of Corrections for up to one year, and the Commissioner has the power to release the offender into the supervision of a suitable authority before the end of that sentence.

Furthermore, the legislature has enacted a "suspension of prosecution" provision which applies to

drug dependent juveniles. This section is used with respect to individuals between the ages of 16 and 18, who are adjudicated to be "youthful offenders." Under this section, the court may:

- (1) Commit the defendant for not more than three years.
- (2) Impose a fine not exceeding one thousand dollars.
- (3) Suspend sentence.
- (4) Impose a sentence but suspend execution of the judgment.

The period of probation for options (3) and (4) may not exceed three years, except when the court decides, within its discretion, to extend probation for a maximum of five years.

Connecticut has recently distinguished the offense of mere "sale" (5 to 10 years) from that of "sale of more than one kilogram" (10 to 20 years). The heavier penalty imposed for the latter offense is aimed at the pusher.

Delaware

Delaware classifies marihuana as a dangerous drug. The penalty for possession is the same as that for using or consuming marihuana, and may involve as much as two years in prison. However, the drug law provides for medical or psychiatric examinations and treatment of drug dependent offenders. The law dealing with marihuana and the problem of its use has been discussed by one Delaware court:

In support of statutory purpose, it is within the bounds of reason for the General Assembly: to designate a single court to deal with a common problem which cuts across normal age distinctions; to give to that single court not only penal powers but specific supplementary medical examination and treatment powers in the drug area which would require additional budgeting; to identify publicly drug offenders; to demonstrate the seriousness of the offenses by placing jurisdiction with the criminal trial court of general jurisdiction; to educate the public as to the extent and nature of the drug problem and especially drug abuse by youth by exposing juveniles to public trial; to place jurisdiction in a statewide court with a potential flexibility in judicial case assignments. *State v. Boardman et al.*, Del-Super., 267 A. 2d 592, 596 (1970).

The Delaware legislature has enumerated mitigating circumstances and reduced first offender penalties for possession of a dangerous drug and sale to a minor. The penalty for possession carries a maximum fine of \$500 and/or 90 days in jail if:

- (1) defendant is under 21, and
- (2) defendant did not possess a narcotic drug, and
- (3) defendant does not sell dangerous drugs, and

- (4) the dangerous drug was obtained from one whom defendant believed was over 21 years of age, was not a dealer, did not make a profit, and had known the defendant for at least one year prior to any sale.

The penalty for sale and sale to a minor has been set at not more than \$1,000 and/or not more than two years, with no minimum sentence if:

- (1) defendant is under 21, and
- (2) defendant sold no narcotic drug, and
- (3) defendant did not make a profit on the transaction and is not engaged in the business of selling dangerous drugs, and
- (4) the sale was made to one who is older than 15 years of age and who has known the defendant for at least one year prior to any sale.

In addition to these two provisions, Delaware provides for conditional discharge for first offense possession. These provisions seem to indicate a willingness on the part of the legislature to reduce the consequences of marihuana offenses in the case of youthful first offenders.

Florida

Despite recent amendments to its law, Florida still classifies marihuana as a narcotic. The possession penalty may be as much as five years, and therefore is a felony. However, the legislature recently provided for misdemeanor treatment of possession of not more than five grams.

In discussing possession, the Florida courts have ruled that possession need not be "exclusive" nor of great duration (*Spataro v. State*, 179 So.2d 873, 877 (1965), *State v. Eckroth*, 238 So.2d 75, 77 (1970)), and that the amount possessed is immaterial. Therefore, the slightest contact with the drug, even one puff of another person's marihuana cigarette, may constitute possession in Florida.

Florida does not have a statutory provision prohibiting possession with intent to sell. It has a very heavy penalty for sale to a minor, however. Whereas first offense sale is punishable by no more than 10 years imprisonment without probation, first offense sale to a minor is punishable by 10 years to life imprisonment, with no possibility of a suspended sentence.

Georgia

Georgia has taken the unusual position of classifying marihuana as a "depressant or stimulant drug." It provides misdemeanor treatment for possession of not more than one ounce. Although possession in excess of one ounce is punishable by up

to two years in prison, first offense manufacture and sale are also punishable by no more than two years incarceration.

Therefore, the Georgia law has some of the lightest penalties presently in effect. Furthermore, conditional discharge is available for first offense possession convictions.

Georgia also provides that addiction to any narcotic, depressant or stimulant drug shall constitute grounds for divorce.

Hawaii

In Hawaii, where the Uniform Controlled Substances Act died in conference committee in 1971, and the most recent amendment to the drug law was made in 1969, marihuana is still classified as a narcotic. All offenses of possession of marihuana are punishable at the court's discretion either as misdemeanors or felonies.

The option to punish as a misdemeanor is important because Hawaii's Supreme Court has ruled that taking a puff from a pipe containing hashish constitutes conscious and substantial possession of the drug. *State v. Hogue*, Sup. Ct. of Hawaii No. 4987 (1971). The offenses of sale and sale to a minor are punishable not only by imprisonment, but also by hard labor.

Idaho

Idaho is a Uniform Act state which classifies marihuana as a hallucinogen. Possession is a misdemeanor and incarceration may be precluded by conditional discharge for first offense possession convictions. Sale penalties are in the normal Uniform Act range of not more than five years for the first offense.

Illinois

In its Uniform Act, Illinois handles marihuana separately from other drugs. The Act is unusual because it deals so extensively with amounts possessed or delivered. Under its previous laws, the penalty for possession was the same regardless of the amount involved.

Possession is presently divided into five categories in Illinois:

2.5 grams or less.....	Not more than 90 days.
2.5 to 10 grams.....	Not more than 180 days.
10 to 30 grams.....	Not more than 1 year.
30 to 500 grams.....	1 to 3 years.
More than 500 grams.....	1 to 5 years.

Sale is also divided into five different categories

2.5 grams or less.....	Not more than 180 days.
2.5 to 10 grams.....	Not more than 1 year or 1 to 2 years.
10 to 30 grams.....	Not more than 1 to 2 years.
30 to 500 grams.....	1 to 4 years.
More than 500 grams.....	1 to 7 years.

There are not only five different degrees of possession and sale under the new Act, but there is also a provision for casual delivery. Under this section, delivery of not more than 2.5 grams of marihuana without consideration is punishable by not more than 90 days in jail. Delivery of 2.5 to 10 grams of marihuana without consideration is punishable by not more than 180 days.

As in most Uniform Act states, Illinois permits conditional discharge for first offense possession or delivery of not more than 2.5 grams, and also for cultivation.

The Illinois Act also includes the unusual offense entitled "Calculated Criminal Cannabis Conspiracy." One is guilty of this offense when he 1) possesses or sells more than 30 grams of marihuana; 2) such violation is a part of a conspiracy undertaken or carried on with two or more other persons; and 3) he receives in return anything of greater value than \$500, or he organizes, directs or finances such violation or conspiracy. The penalty for this offense is from three to 10 years imprisonment and a fine of not more than \$200,000.

Indiana

In Indiana marihuana is classified as a dangerous drug. First offense possession of less than 25 grams of marihuana or less than five grams of hashish is a misdemeanor, with a sentence of 30 days to a year. Otherwise, possession remains a felony.

Indiana has not created separate penalties for simple possession, sale or cultivation; instead, all these offenses are penalized within the range of one to ten years.

Iowa

Marihuana is a hallucinogen in Iowa, a Uniform Act state. Possession is a misdemeanor for which no sentence may exceed six months.

In addition to the offense of sale, the Act contains an accommodation provision which allows a defendant who has transferred marihuana to be sentenced as if for possession if he can show that there was no intent to profit from the transfer. There is no statutory limit on the amount of marihuana which may be delivered without profit, so

what constitutes an accommodation is a matter of judicial discretion.

If a defendant pleads guilty to a charge of possession, delivery, or manufacture, and indicates that he is addicted to, dependent upon, or a chronic abuser of a controlled substance, the court may order him committed to an in-patient or out-patient facility.

Iowa has a conditional discharge section which is applicable to first offense possession or accommodation convictions. It also has a special provision which allows an injunction to issue against "assemblages" where the promoters or sponsors have not taken due care to prevent the unlawful use or distribution of controlled substances, including marihuana.

Kansas

Marihuana is a narcotic in Kansas, despite a recent amendment to the law. Possession is a misdemeanor, at least for the first offense, but sale and cultivation are both felonies, carrying minimum sentences of at least one year.

Kentucky

Marihuana in Kentucky is classified as a dangerous drug. First offense possession is a misdemeanor, and the sentencing authority has the discretion to order confinement of up to six months in jail, or treatment and rehabilitation for up to one year. The sentencing authority may require a period of probation in the charge of a health facility in lieu of punishment in possession cases. Conditional discharge is also available for first offense possession convictions.

A recent Kentucky decision has held that if one offers for sale what he reasonably believes to be a drug, and it later turns out not to be a drug, his mistake of fact does not obviate a conviction for sale. *Shanks v. Commonwealth*, 463 S. W. 2d 312, 315 (1971). However, if a seller knowingly and falsely represents a substance to be a drug and it is not, although other laws may be violated, the marihuana statute is not.

Louisiana

Louisiana is a Uniform Act state, and classifies marihuana as a hallucinogen. First offense possession is a misdemeanor, with conditional discharge available. Sales are punishable by not more than 10 years at hard labor and/or a fine of up to \$15,000. Louisiana is one of the states that specifically provides criminal penalties for an attempt or conspiracy to violate its drug laws.

Maine

Maine deals with marihuana in a separate classification from all other drugs. Possession is a misdemeanor and sale is a felony. The penalties are typical of Uniform Act states, although Maine does not have a Uniform Act.

Maryland

Under Maryland's Uniform Act, marihuana is classified as a hallucinogen. Possession is a misdemeanor. Conditional discharge is available not only for possession, but also for any first offense violation of the marihuana laws. This is a unique provision.

Maryland defines possession to include both actual and constructive dominion and control. The statutory prohibition of constructive possession is unusual.

In addition, Maryland courts have held that neither the duration of possession nor the amount possessed are material facts, as long as there is enough of the substance possessed to allow for a proper determination of its identity. *Brady v. State*, 244 A.2d 470, 471 (1968). Also, in Maryland it is no excuse that the defendant does not know that what he possesses and controls is a prohibited drug. *Davis v. State*, 262 A.2d 578, 581 (1970).

Massachusetts

Massachusetts, in its recent Uniform Act, has classified marihuana as a hallucinogen. All first offense possession convictions may draw a sentence of not more than six months probation. Conditional discharge and expungement of record are available for first offense possession. In addition, expungement of the complete record is mandatory upon acquittal for any drug offense. First offense sale carries the comparatively lenient penalty of not more than two years.

Michigan

Michigan's Uniform Act classifies marihuana as a hallucinogen. All possession offenses are misdemeanors, with relatively lenient penalties. Conditional discharge is available for first offense possession only. Accommodation sale is also a misdemeanor, with no limitation on the quantity sold.

The Michigan statute specifies that possession of more than two ounces of marihuana is *prima facie* evidence of possession with intent to sell. One who possesses more than two ounces is subject to the "sale" penalty of up to five years, unless he can disprove intent to sell.

Minnesota

Minnesota's Uniform Act classifies marihuana as a hallucinogen. It carves out a misdemeanor penalty for possession of less than 1.5 ounces. Possession of greater amounts of marihuana or of any amount of hashish (the resinous form of marihuana) remains a felony, and may bring a sentence of up to three years. Distribution of less than 1.5 ounces of marihuana for no remuneration is treated like possession of less than 1.5 ounces.

The amount of marihuana possessed in all cases must be a useable amount. *State v. Resnick*, 177 N.W.2d 418, 420 (1970). Conditional discharge is possible for any first offense possession, as is expungement of the record. First offense sale carries a penalty of not more than five years.

Mississippi

Mississippi's new Uniform Act places marihuana in the hallucinogen category. Because of an ambiguity in the statute as passed by the Mississippi Legislature, possession may be either a felony (like delivery and manufacture), or a misdemeanor, depending upon which section of the statute is used. The Mississippi Legislature is currently attempting to remedy this error. Mississippi now requires that one knowingly and intentionally possess marihuana in order to be convicted for possession. This was not the case under the former law. See *Wright v. State*, 236 So.2d 408, 413 (1970).

Missouri

As most Uniform Act states, Missouri classifies marihuana as a hallucinogen. Although the Missouri Uniform Act makes possession of a small amount (not more than 35 grams of marihuana or not more than five grams of hashish) a misdemeanor, simple possession of more than these amounts may be either a misdemeanor or a felony in the discretion of the court and/or the prosecutor.

The Act also provides for misdemeanor treatment of an offender convicted for sale without remuneration of not more than 35 grams of marihuana or not more than five grams of hashish, provided the offender has never been convicted of a felony relating to controlled substances.

In addition, conditional discharge and expungement of the record are possible for first offenders under the age of 21.

Compared to Missouri's relatively lenient provisions for possession and accommodation sale, as well as to the sale penalties in other Uniform Act states, sale in Missouri carries a very harsh pen-

alty. First offense sale or delivery is punishable by from five years to life, and sale to a minor adds the option of the death penalty.

Montana

Although Montana is not a Uniform Act state, it does classify marihuana as a hallucinogen. Possession of less than 60 grams of marihuana or one gram of hashish is a misdemeanor. Simple possession of more than these statutory amounts may be a felony punishable by up to five years imprisonment or by rehabilitative treatment for six months to two years if the defendant is shown to be an excessive or habitual user.

The range of penalties available for sale and cultivation in Montana is wide. Judges may select any penalty between one year and life imprisonment. In Montana any first time marihuana offender under 21 years of age is presumed by law to be entitled to deferred imposition of sentence upon conviction. The provision for deferring sentence is similar to conditional discharge, which is now permitted in most states.

Nebraska

Nebraska, a Uniform Act state, classifies marihuana as a hallucinogen. The penalties for possession are comparatively lenient, since possession of up to one pound is only a misdemeanor. Moreover, first offense possession of less than one pound of marihuana is punishable by not more than seven days in the county jail, and all subsequent offenses by not more than 14 days in a section of the county jail "separate and apart from other prisoners," and/or a fine of not more than \$1,000.

Possession of more than one pound of marihuana is a felony or misdemeanor at the discretion of the court, as is sale of any amount. In addition, the law stipulates that anyone convicted of a marihuana offense shall attend an education course on drug abuse.

The Nebraska courts have interpreted possession to exclude mere presence at a place where marihuana is found. *State v. Faircloth*, 181 Neb. 333, 148 N. W. 2d 187 (1967). Nonetheless, the courts have also said that when contraband is found on a defendant's premises or in an automobile possessed and operated by him, the evidence of unlawful possession is sufficient to sustain a conviction in the absence of any other reasonable explanation. *State v. Rys*, 186 Neb. 341, 183 N. W. 2d 253 (1971).

Nevada

As do most Uniform Act states, Nevada classifies marihuana as a hallucinogen. Contrary to the recommendation of the Uniform Act, Nevada has made simple possession of marihuana a felony. Although it provides discretionary misdemeanor treatment of possession for personal use of up to one ounce, this is limited to offenders under the age of 21.

Nevada permits conditional discharge for first offenses of both types of possession, and it offers the possibility of expungement of records to persons under 21.

Since sale in Nevada has been interpreted by the courts to include transfers made without a profit, the Nevada sale penalties are very severe. Although the penalty for first offense sale is not unlike that in other states, the second such offense is punishable by life imprisonment without possibility of parole.

First offense sale to a minor is also punishable by life imprisonment, but parole is possible after seven years of the term has been served. No parole is possible for a second such offense.

New Hampshire

Marihuana in New Hampshire is classified as a controlled drug. First offense possession of one pound or less is a misdemeanor. Subsequent possession offenses or possession of more than one pound are felonies. Sale carries a penalty of up to 10 years for the first offense.

New Jersey

New Jersey's Uniform Act classifies marihuana as a hallucinogen. One who possesses less than 25 grams of marihuana or less than five grams of hashish is classified as a disorderly person.

This offense is neither a misdemeanor nor a felony. Rather it is a quasi-criminal, non-indictable offense which may bring up to six months in jail. It is unlikely that this penalty is often imposed, however, because a recent New Jersey Supreme Court decision, handed down just prior to the effective date of the New Jersey Uniform Act, held that New Jersey courts should give suspended sentences and probation in all first offense possession cases. *State v. Ward*, 57 N.J. 75, 270 A. 2d 1 (1970).

The New Jersey courts have stated that the primary purpose of drug laws is to suppress illegal traffic. *State v. Reed*, 34 N.J. 554, 170 A. 2d 419 (1961). In this regard, the recent New Jersey Act provides the same felony penalty (up to five years imprisonment) for possession of more than

25 grams (an amount which permits inferred intent to sell) as it does for sale.

New Jersey provides conditional discharge for first offense possession, with expungement of the record possible, regardless of the offender's age.

In addition, *any* marihuana offender under the age of 21 is eligible to apply for expungement of his records if he has been sentenced to a period of probation and has successfully completed it.

New Mexico

New Mexico recently adopted the Uniform Act, and as recommended, classifies marihuana as a hallucinogen. The statute excludes hashish from the definition of marihuana and specifically defines hashish to be the resinous form of *Cannabis sativa* L.

The New Mexico drug law punishes possession of marihuana according to the amount possessed. Possession of one ounce or less is a petty misdemeanor, punishable by a \$50 to \$100 fine and up to 15 days in jail; possession of more than one ounce but less than eight ounces is a misdemeanor punishable by up to a year in jail; and possession of eight ounces or more is a felony.

Conditional discharge is available for first offense possession of any amount and expungement of record is provided for offenders 18 years old or younger. Surprisingly, possession of any amount of hashish is punishable as a misdemeanor, no similar gradations having been provided.

New Mexico does, however, differentiate in the usual way between marihuana and hashish for the purpose of penalizing distribution or possession with intent to distribute. First offense distribution of marihuana is a felony punishable by one to five years imprisonment, whereas distribution of hashish is punishable by two to 10 years imprisonment. Similarly, distribution of marihuana to a minor, punishable by two to 10 years imprisonment, is distinguished from the distribution of hashish to a minor, punishable by 10 to 50 years.

Contrary to the recommendations of the Uniform Act, the New Mexico law does not limit sale to a minor charges to situations in which the buyer is at least three years younger than the seller.

Distribution of a small amount of marihuana for no remuneration carries the penalty of one to five years imprisonment. The courts determine the meaning of small amount. Arguably this section could be used to permit a lesser penalty for casual distribution to a minor. Otherwise this provision does not ameliorate the penalties applicable in marihuana cases because the penalty is the same as that for distribution *with* consideration.

Manufacture of controlled substances, including marihuana, is treated as a felony and punishable by the harsh term of 10 to 50 years imprisonment. This is the only American jurisdiction in which manufacture, to wit, cultivation, of marihuana is more heavily penalized than distribution.

New York

New York still classifies marihuana as a narcotic, in spite of recent amendments to its law. The Act provides a misdemeanor penalty for possession without setting any amount limitation on its applicability. Possession with intent to sell between one-fourth ounce and one ounce is a felony carrying a penalty of two and one-third to seven years, and possession of more than one ounce is a felony punishable by five to 15 years, or the same penalty as for sale.

These severe possession penalties remain on the books even though a New York court has held that the intent of the drug laws is to charge the seller with a felony, not the buyer. *People v. Pasquarello*, 282 App. Div. 405, 123 N.Y.S.2d 98 (1953).

The failure of New York to designate a maximum amount for misdemeanor possession permits prosecutors to charge persons in possession of more than one-fourth ounce with a misdemeanor or a felony, in their discretion. Possession offenses may be treated as misdemeanors on another theory as well, as demonstrated by a recent New York decision.

Under the New York Uniform District Court Act a court may reduce a felony to a misdemeanor where the amount of the substance possessed is "just over the dividing line." *People v. Kerwin*, 60 Misc. 2d 799, 303 N.Y.S.2d 605 (1969). The court did not indicate what it meant by "just over the dividing line." Here judicial line drawing has further obscured an already ambiguous statutory scheme.

The New York Penal Law relating to the offense of possession with intent to sell is ambiguous from another point of view as well. Marihuana is classified as a "narcotic," which in turn is classified as a "dangerous drug."

Under one section of the penal code possession with intent to sell a dangerous drug is punishable as a felony with imprisonment of one to four years. A subsequent section of the law punishes possession of a narcotic with intent to sell as a felony by imprisonment of two and one-third to seven years. Although the latter penalty applies more directly to marihuana, a reasonable interpretation of the former section could make it applicable to marihuana as well.

The same sort of ambiguity is present in the sections penalizing sale. Sale of a dangerous drug is punishable as a felony with imprisonment of two and one-third to seven years. On the other hand, sale of a narcotic is punishable as a felony with imprisonment of five to 15 years.

New York has a first offense conditional discharge provision for all possession offenses. Also it permits the records to be sealed until the defendant is again convicted of a drug offense. This is equivalent to expungement.

North Carolina

North Carolina's Uniform Act classifies marihuana as a hallucinogen. First and second possession offenses are misdemeanors, with conditional discharge possible for first offenders. If a defendant is 21 or under he may have his record expunged for first offense possession.

Although this penalty structure may seem very lenient, under North Carolina's statute possession of more than five grams of marihuana or more than one gram of hashish is presumed to be possession with intent to distribute. Therefore, unless the defendant possessing more than this amount is able to prove that his possession was not for the purposes of distribution, he is subject to conviction for a felony carrying a maximum penalty of five years imprisonment.

North Carolina also penalizes attempt or conspiracy to violate the drug laws. In addition, the North Carolina Attorney General has the authority to advance state funds to potential drug offenders in such sums as he deems appropriate.

North Dakota

North Dakota is a Uniform Act state which classifies marihuana as a hallucinogen. Although all possession offenses are punishable by sentence of no more than one year, possession is a felony or misdemeanor in the discretion of the prosecution or the court. As the Uniform Act recommended North Dakota permits conditional discharge for first offense possession.

North Dakota allows a judge to authorize an officer executing a search warrant to break open an outer or inner door or window if there is probable cause to believe a drug violation is taking place on the premises.

Ohio

Ohio is not a Uniform Act state, but it classifies marihuana as a hallucinogen. Although first offense possession is a misdemeanor, sale and sale to a minor are felonies for which very stringen

penalties are provided. It is possible to receive a sentence of 20 to 40 years for first offense sale; and 30 years to life for first offense sale to a minor.

In addition to these two felony offenses, Ohio makes first offense possession with intent to sell a felony punishable by imprisonment of 10 to 20 years.

In contrast to the conventional sentencing procedures, the statute provides special procedures for drug dependent defendants, for whom it is possible to suspend sentence and order examination and treatment. It is unknown whether or not these procedures are ever applied to marihuana offenders.

Oklahoma

Oklahoma is a Uniform Act state which classifies marihuana as a hallucinogen. First offense possession is a misdemeanor for which it is possible to receive conditional discharge with expungement.

Oklahoma punishes attempt and conspiracy to commit a drug offense with the same penalty prescribed for the offense itself.

Oregon

Although Oregon amended its drug laws in 1971, it still maintains the narcotic classification for marihuana. Possession of less than one ounce, or use or being under the influence of marihuana is a misdemeanor. Simple possession of over this amount, however, is a felony punishable by not more than 10 years, as are sale and cultivation, all of which are classified as "criminal activity in drugs."

Oregon also has the unusual offense of "fraudulent sale of imitation drugs to a peace officer or his agent," which is a misdemeanor punishable by not more than six months and/or \$500.

Pennsylvania

Marihuana is still classified as a narcotic in Pennsylvania. The severe penalty for possession is separate or solitary confinement for two to five years. However, there is a more lenient misdemeanor penalty for "using" or "taking" marihuana. Cultivation of marihuana in Pennsylvania is also a misdemeanor, but sale carries a mandatory minimum sentence of at least five years.

Rhode Island

Marihuana is still a narcotic in Rhode Island, although the state is among those which are considering the Uniform Act. Its present statute pro-

vides extremely harsh statutory penalties for marihuana offenses. Possession is a felony, and may bring a sentence of up to 15 years. Sale may result in as much as a 40-year term, and sale to a minor may bring life imprisonment.

The Rhode Island statute provides a more lenient penalty for possession with intent to sell and deliver than for sale. Possession with intent is punishable as a felony with a maximum sentence of 20 years imprisonment.

South Carolina

South Carolina's Uniform Act classifies marihuana as a hallucinogen. Possession of less than 28 grams of marihuana or less than 10 grams of hashish (the resinous form of marihuana) is a misdemeanor punishable by a sentence of not more than three months. Upon being charged with possession, bail must be set at not more than twice the maximum fine. Convictions for "simple" possession of greater amounts may result in sentences of not more than six months, so simple possession as well as "possession for personal use" is a misdemeanor in South Carolina.

In addition, if an offender arrested for sale can prove that his transaction was only an accommodation to another individual for no profit, he will be sentenced under the penalties for possession. Conditional discharge is permitted in the case of first offense possession, and expungement is available for offenders under 25.

South Dakota

South Dakota's Uniform Act classifies marihuana as a hallucinogen. Possession of one ounce or less on the first offense is a misdemeanor. A second conviction for this offense is a felony, and may bring a sentence of 10 to 15 years.

Possession of more than an ounce is a felony even on the first offense; however, all first offense possession convictions may result in conditional discharge. No expungement of the record is permitted. Sale is a felony punishable by five to 10 years in prison.

Tennessee

Tennessee classifies marihuana as a hallucinogen. Possession is a misdemeanor, but instead of confinement an offender may be committed to a state-operated drug treatment facility for rehabilitation. The same penalty applies to distribution of not more than one-half ounce of marihuana for no remuneration. All other sales are felonies, punishable by 15 years in prison.

Texas

Marihuana is classified as a narcotic in Texas, despite recent amendments to its drug laws. All offenses under these laws are felonies, and may be punished by life imprisonment. In addition, there is a minimum mandatory sentence for recidivists.

Although the courts in Texas have held that the quantity possessed must be a useable amount, *Pelham v. State*, 298 S. W. 2d 171, 173 (1957), it has also been ruled that 63 milligrams are useable. *Tuttle v. State*, 410 S. W. 2d 780, 782 (1966).

A recent decision held that absent any showing to the contrary, any admission of possession is an admission that the amount possessed was useable. *Rawls v. State*, 449 S. W. 2d 57 (1970).

The unusual breadth of the Texas scheme for control of marihuana is evidenced by the proliferation of punishable offenses under its statute. For example, Texas punishes the "offer to buy" marihuana as well as its possession, distribution, and use.

To simplify prosecutions for use the courts have attempted to establish a reasonable test for "being under the influence" as follows:

It is reasonable to conclude that a subject is under the influence of marihuana from testimony that at the time of the arrest he was walking in a "light-footed" manner, his eyes were dilated, his speech was slow, and he did not have the smell of alcohol on his breath. *Parson v. State*, 432 S. W. 2d 89, 93 (1968).

The severity of the Texas approach to controlling marihuana puts it in the distinct minority of states which have not followed the trend toward reduced penalties.

Utah

Utah is a Uniform Act state which has followed the recommendations of the National Conference of Commissioners on Uniform State Laws since it classifies marihuana as a hallucinogen, and first and second offenses of possession are misdemeanors. Additionally, conditional discharge for first offense use, possession, production, or distribution of marihuana is possible, but there is no provision for expungement of the record.

Utah recognizes two types of delivery. Its statute penalizes first offense delivery in exchange for items of value by twice the penalty imposed for delivery without remuneration. Utah also provides that a witness may be compelled to testify in a drug case in exchange for immunity from prosecution as to the matters covered by his testimony.

Vermont

Vermont lists marihuana in a separate category among the "regulated" drugs covered by its drug

statute. Possession of marihuana is a misdemeanor punishable by a sentence of not more than six months. Possession of one-half ounce or 25 cigarettes is a felony punishable by not more than two years in prison, and possession of two or more ounces or 100 cigarettes is a felony punishable by not more than five years in prison.

The Vermont statute is ambiguous because the section dealing solely with possession does not contain a specific amount limitation. Possession of up to one-half ounce is definitely a misdemeanor, but possession of an amount greater than one-half ounce, separately designated as raising a presumption of possession with intent to sell, also apparently may be prosecuted under the mere possession section.

The statute does not specify that the misdemeanor possession penalty only applies to cases of possession of less than one-half ounce.

The following two paragraphs are from Section 4224 (Violations and Penalties) of the Vermont Drug Law:

(d) A person knowingly and unlawfully possessing a regulated drug *with intent to sell the same* or in an amount consisting of (1) twenty-five or more cigarettes containing marihuana, or (2) one or more preparations, compounds, mixtures or substances of an aggregate weight of . . . (B) one-half ounce or more containing marihuana . . . shall be imprisoned in the state prison not more than two years, or fined not more than \$2,000.00, or both.

(e) A person knowingly and unlawfully possessing a regulated drug *with an intent to sell the same for a consideration* or in an amount consisting of (1) one hundred or more cigarettes containing marihuana, or (2) one or more preparations, compounds, mixtures or substances of an aggregate weight of . . . (B) two or more ounces containing any marihuana . . . shall be imprisoned in the state prison not more than five years and fined not more than \$5,000.00. (Emphasis added.)

These two sections designate the amount of marihuana which must be possessed in order to raise a conclusive statutory presumption of possession with intent to sell or possession with intent to sell for a consideration.

The use of "or" in the second line of both paragraph (d) and (e) of this section seems to indicate that there are two offenses: possession of any amount with the requisite intent and possession of a designated amount, both of which offenses are punishable as felonies. Such a reading of the statute makes little sense however.

If this section of the Vermont law means that possession of less than the designated amounts may be either possession "with intent to sell" or possession "with intent to sell for consideration," how is a prosecutor or a court, without the aid of the "applicable amount presumption," to decide which intention the defendant actually had?

Virginia

Virginia is a Uniform Act state which classifies marihuana as a hallucinogen. Although it makes first offense possession of marihuana punishable as a misdemeanor, second and subsequent offenses are punished as felonies, by imprisonment of two to 20 years or not more than 12 months in jail.

The Virginia statute distinguishes possession of hashish⁵ from marihuana and makes possession of hashish punishable as a felony with imprisonment of one to ten years. A recent court decision under the old drug act held that the duration of possession is immaterial and that it need not always be actual possession. *Ritter v. Commonwealth*, 210 Va. 732, 740 (1970). As a result, possession may include use or being under the influence.

Virginia provides unusually severe penalties for distribution and distribution to a minor. Distribution is punishable as a felony with imprisonment of one to 40 years and/or a fine of not more than \$50,000. Distribution to a minor is similarly classified and punishable by imprisonment of five to 40 years and/or a fine of not more than \$50,000.

Washington

Washington classifies marihuana as a hallucinogen in its Uniform Act. Although possession of less than 40 grams of marihuana is a misdemeanor punishable by not more than 90 days in jail, simple possession is categorized as a felony, with a possible penalty of five years imprisonment. The imposition of this latter penalty, the same as that for sale, is contrary to the recommendation in the Uniform Act that all possession offenses be misdemeanors.

West Virginia

West Virginia has adopted the Uniform Act which classifies marihuana as a hallucinogen. Under West Virginia law persons convicted for first offense possession of less than 15 grams *must* receive a conditional discharge. This is the only mandatory conditional discharge provision in the United States at the present time. In contrast, simple possession of more than 15 grams is a misdemeanor, with conditional discharge and ex-

⁵ Hashish means "the resin extracted from any part of the plant *Cannabis sativa* L., whether growing or not, and every compound, manufacture, salt, derivative, mixture or preparation of such resins, or any resin extracted from the mature stalks of said plant." 54-524.2 (16) Code of Virginia.

pungement available but not required for first offenders.

First offense distribution of less than 15 grams for no remuneration carries the same mandatory conditional discharge penalty as possession of that small amount. Penalties for sale are similar to those in most Uniform Act states: not more than five years imprisonment for a first offense.

Wisconsin

Wisconsin classifies marihuana as a dangerous drug. Possession is a misdemeanor. There is a provision allowing conditional discharge for first offense possession, but no expungement of records is possible. Wisconsin is one of two states (the other being Alaska) that does not specifically prohibit cultivation. Those arrested for cultivation are prosecuted under the possession section of the law.

Wyoming

Wyoming is a Uniform Act state which classifies marihuana as a hallucinogen. First and second possession offenses are misdemeanors punishable by not more than six months in the county jail and fines of not more than \$1,000. In addition, conditional discharge, as recommended by the Uniform Act, is available for possession as a first offense, although there is no possibility of expungement.

Manufacture of marihuana is penalized as a felony, as are sale and delivery. Cultivation is a misdemeanor. Therefore, insofar as cultivation of marihuana may also be considered manufacture of marihuana, it is punishable as either a misdemeanor or a felony.

Puerto Rico

Puerto Rico is a Uniform Act jurisdiction which classifies marihuana as a hallucinogen. Contrary to the recommendation of the Uniform Act, Puerto Rico makes simple possession of marihuana a felony offense. However, it does follow the recommendation of the Act in providing conditional discharge for first offense possession, and making expungement of the record possible.

Second offense sale and first offense sale to a minor are punishable by the felony penalty of 10 to 40 years imprisonment and/or a fine of not more than \$20,000.00.

District of Columbia

The District of Columbia classifies marihuana as a narcotic. All first offense convictions for pos-

session or sale are misdemeanors. Subsequent offenses are felonies.

Guam

Guam has a Uniform Act which classifies marihuana as a hallucinogen. Possession is a misdemeanor, with conditional discharge possible for first offense possession convictions.

Virgin Islands

The Virgin Islands Uniform Act classifies marihuana as a hallucinogen. Possession is a misdemeanor with conditional discharge possible for first offense convictions. Expungement of the record is possible if the offender successfully completes his period of probation, and if he was under 21 at the time the offense was committed.

A nonpublic record of convictions is kept, which may only be used for purposes of determining whether conditional discharge is available for subsequent offenses.

IV. The Role of Ancillary Offenses and Constructive Possession in Controlling Marihuana

ANCILLARY OFFENSES *

One aspect of the campaign against use of marihuana has been the enactment of laws ancillary to the basic offenses of possession and sale. Most such ancillary offenses prohibit conduct of one of three types: (1) the maintenance of any place or establishment where controlled substances are used,⁶ (2) presence at such a place or establishment,⁷ and (3) possession of "narcotics paraphernalia" or other implements of a crime.

These offenses may be useful weapons against illegal drug use where there is insufficient evidence of use or possession or such evidence has been illegally obtained. They also frequently appear in plea bargaining sessions in cases where the de-

* This discussion is based in part on a paper prepared by Marjery Smith, Attorney, Washington, D.C.

⁶ The term "controlled substances" is used here although some states specify "narcotics." Several states still classify marihuana as a narcotic. Thus in most cases the ancillary offenses may be used against marihuana as well as other drug offenders.

⁷ Although loitering and vagrancy statutes have occasionally been used against narcotics-related activities the recent trend toward invalidating these statutes has significantly diminished their role in the regulation of narcotic use. See, *Ricks v. United States*, 414 F.2d 1111 (D.C. Cir. 1968), *State v. Grahovac*, 480 P.2d 148 (Hawaii 1971) and *People v. Beltrand*, 314 N.Y.S. 2d 276 (1970) [all holding vagrancy statutes unconstitutional for vagueness].

fendant was apprehended on a more substantial drug charge.⁸

In addition they function as another means of making marihuana use socially unacceptable by criminalizing mere association with marihuana users.

As discussed herein, attacks on the constitutionality of these offenses have been defeated for the most part; in several instances, however, courts have felt compelled to read knowledge requirements into the challenged statutes.

Application of these laws raise complex questions of policy that have yet to be answered. In attempting to reach the marihuana user, these laws make behavior criminal that is normally non-criminal, for example, the maintenance of a home or particular personal associations.

It is questionable whether such prohibitions are very helpful in eliminating or discouraging the use of marihuana; and even if they serve any benefit, it is questionable whether their utility is substantial enough to justify the encroachment upon individual liberties which their enforcement entails.

A. Maintaining an Illegal Place or Establishment

A majority of states have enacted laws making it illegal to own or operate a place in which controlled substances are used or sold. These statutes have declared such places to be unlawful or to be public nuisances, or both.

The violation of "maintenance statutes" is punishable as a felony in 21 jurisdictions and as a misdemeanor in 15. Two states give the courts discretion to sentence this offense as a misdemeanor or felony.

Section 11557 of the California Health and Safety Code is typical of the statutes making maintenance of an illegal establishment a criminal offense:

Sec. 11557. *Opening or maintenance of unlawful places.* Every person who opens or maintains any place for the purpose of unlawfully selling, giving away, or using any narcotic shall be punished by imprisonment . . .⁹

Similarly, Section 402 of the proposed Uniform Controlled Substances Act which has been adopted

⁸ Bonnie and Whitebread, *The Forbidden Fruit and the Tree of Knowledge: An Inquiry into the Legal History of American Marihuana Prohibition*, 56 Va. L. Rev. 971, 1114-1115 (1970).

⁹ Cal. Health and Safety Code Sec. 11557 (West Supp. 1971). Similar statutes are found in Arkansas, Ark. Stat. Ann. Par. 82-1013; New Hampshire, N.H. Rev. Stat. Ann. Par. 318-B: 16; North Dakota, N.D. Code Ann. Par. 19-03. 1-24. 1e; Rhode Island, R.I. Gen. L. Ann. Par 21-28-34; Tennessee, Tenn. Code Ann. Par. 52-1815.

in 30 jurisdictions and is pending in 17 others provides that it is unlawful for any person:

Knowingly to keep or maintain any store, shop, warehouse, dwelling, building, vehicle, boat, aircraft, or other structure or place, which is resorted to by persons using controlled substances in violation of this Act for the purpose of using these substances, or which is used for keeping or selling them in violation of this Act.

The provision of the D.C. Code is typical of statutes characterizing illegal establishments as nuisances which are subject either to criminal penalties, abatement proceedings, or both.

Par. 33-416. *Common Nuisances.* Any store shop, warehouse, dwelling-house, building, vehicle, boat, aircraft, or any place whatever, which is resorted to by narcotic drug addicts for the purpose of using narcotic drugs or which is used for the illegal keeping or selling of the same, shall be deemed a common nuisance. No person shall keep or maintain such a nuisance.²⁰

Puerto Rico permits closing "illegal establishments" by court order so long as the illegal situation exists.

In addition to these two types of statutes, most states which have adopted the Uniform Act have included the section concerning the issuance of injunctions:

Section 503. [Injunctions.]

(a) The [trial courts of this State] have [may exercise] jurisdiction to restrain or enjoin violations of this Act. This provision provides an alternative to criminal sanctions for eliminating in a summary manner "illegal establishments" where controlled substances are either stored or used. Some states which have "common nuisance" type provisions may achieve the same result by using abatement proceedings.

The intent of these statutes is to forbid the maintenance of places in which activities pertaining to illegal drugs are known to take place. Challenges to these statutes, focusing on construction of the term "maintenance," have raised the question of the degree of knowledge required by the owner, lessee or "keeper" of the "place" associated with the illegal activities.

In statutes such as California's (Sec. 11557), the statute itself provides that the "place" must be maintained *for the purpose* of engaging in

illegal drug use and the state has the burden of proving the element of intent.

In California, evidence of "purpose" has been found where there is repeated use of the premises for the sale and smoking of marihuana in the presence of the owner or lessee, with his knowledge and acquiescence.¹¹ Therefore, "a single isolated instance of the forbidden conduct will not support a finding of maintaining a place for sale, giving away or using a narcotic."¹² But, this same court also held that the circumstances surrounding a sale may evidence an intent to provide further such service and thus justify a finding of "maintenance."¹³

The implications of the use of maintenance statutes are also demonstrated by a New York court decision which held that mere acquiescence and knowledge that drugs were being used on the premises of the lessee was sufficient to sustain a conviction for maintenance although it would not have been sufficient to support a conviction for possession.¹⁴

In that case the defendant had moved out of his apartment one week prior to the narcotics raid but had previously acquiesced in the use of his place for "pot parties." Although the defendant had not been present at the time of the raid, the court found purposive "maintenance" based on his prior knowledge coupled with his prior acquiescence in illegal use of marihuana on the premises.¹⁵

The result of this case is that under New York law anyone who becomes aware of the use of marihuana on "his" premises is under an affirmative duty to halt these activities or face criminal prosecution. Where the user is a member of the family or a close friend this may be a very harsh burden indeed, especially if the only effective method of halting the activity is reporting it to the police or terminating a familial relationship.

In contrast, a District of Columbia court read a more substantial purpose requirement into its maintenance statute by requiring proof of the presence of illegal drugs in useable or saleable amounts.¹⁶

Regardless of the judicial construction of these statutes, the Commission's national survey of the opinion and practice of prosecuting attorneys indi-

²⁰ D.C. Code Ann. Par. 33-416. Similar statutes are found in Colorado, Colo. Rev. Stat. Ann. Par. 48-5-13; Connecticut, Conn. Gen. Stat. Ch. 359 Par. 19-466; Delaware, Del. Code Ann., Title 16 Par. 4710; Florida, Fla. Stat. Ann. Par. 398.14; Hawaii, Hawaii Rev. Stat., Title 19 Par. 329-19; Indiana, Ind. Ann. Stat. Title 10 Par. 3531; Kansas, Kan. Stat. Ann. Par. 65-2512; New York, N.Y. Public Health Law Par. 3342; Ohio, Ohio Rev. Code Ann. Par. 3719.46; Rhode Island, R.I. Gen. Laws Ann. Par. 21-28-34; and Texas, Texas Penal Code, Title 12, Art. 725(b) Par. 13.

¹¹ *People v. Clay*, 273 Cal. App. 2d 279, 78 Cal. Rptr. 56 (1969); *People v. Horn*, 187 Cal. App. 2d 68, 9 Cal. Rptr. 578 (1961).

¹² *People v. Clay*, 78 Cal. Rptr. at 59.

¹³ *Id.* at 59.

¹⁴ *People v. Schriber*, 310 N.Y.S. 2d 551 (1970).

¹⁵ *Id.* at 553.

¹⁶ *Marshall v. United States*, 229 A. 2d 449 (D.C. App. 1967). Also see *Gnatt v. U.S.*, 267 A. 2d 350 (1970).

cates that such offenses are not commonly used against marihuana offenders.

Prosecutions under almost all of these statutes require a showing of "knowledge of maintenance" on the part of the offender. Thus, a conviction under such a provision would be as difficult to obtain as a conviction for use or sale.

In addition, most of those jurisdictions which do not limit illegal maintenance to situations where knowledge is present impose only a civil fine when knowledge is not shown.

Some statutes only prohibit the maintenance of a place which is "resorted to by narcotic addicts." It is questionable whether these statutes are applicable to marihuana offenders. Although marihuana is classified by 12 states as a narcotic, it is common knowledge that marihuana use does not render the user physically dependent on the drug. Therefore, a statute referring to "addicts" should not be read to include marihuana users.

B. Presence in a Place Where Controlled Substances Are Being Illegally Used¹⁷

Presence statutes, all of which make mere "presence" a misdemeanor, are found in 12 states and the District of Columbia.

Typically these statutes provide:

It is unlawful to visit or to be in any room or place where any narcotics are being unlawfully smoked or used with knowledge that such activity is occurring. Calif. Health and Safety Code Sec. 11556.¹⁸

A variation on this theme is found in the District of Columbia:

Whoever is found in the District in a gambling establishment or an establishment where intoxicating liquor is sold without a license or any narcotic drug is sold, administered, or dispensed without a license shall, if he knew that it was such an establishment and if he is unable to give a good account of his presence in the establishment, be [punished].¹⁹

Also of interest is the law of Massachusetts which was repealed in 1971. This law provided:

¹⁷In addition the penal laws of many states have so-called "bawdy or disorderly house" statutes which are not specifically directed at illegal drug use. These statutes prohibit frequenting places where opium or other controlled substances are used or certain criminally anti-social acts considered to be "vices" take place. Theoretically, these laws may be used to prosecute drug offenders; in practice, they are generally not so used.

¹⁸Similar statutes are found in Hawaii, Hawaii Rev. Stat. Title 19 Par. 329-19; Maine, Maine Rev. Stat. Ann. Title 22 Ch. 558 Sec. 2382. 2; Nebraska, Rev. Stat. Neb. Par. 28-4. 127(1)(g); New Hampshire, N.H. Rev. Stat. Ann. Par. 318-B: 26; Rhode Island, R.I. Gen. L. Ann. Par. 21-28-34; South Dakota, S.D. Compiled Laws Ann. Par. 39-17-110; Utah, Utah Code Ann. Par. 59-13a-31. 1.

¹⁹D.C. Code Ann. Par. 22-1515(a).

Whoever is present at a place where he knows a narcotic drug is illegally kept or deposited, or whoever is in the company of a person, knowing that said person is illegally in possession of a narcotic drug, or whoever conspires with another person to violate the narcotic drug law, may be arrested without a warrant by an officer or inspector whose duty it is to enforce the narcotic drugs law, and may be punished. . . .²⁰

Each of the foregoing statutes survived challenges to their constitutionality.

Section 11556 of the California Health and Safety Code has been challenged as void for vagueness with respect to "place,"²¹ and as violative of the First Amendment right of association.²² In both instances the court upheld the statute.

In *Lee*, where the defendant was a passenger in a car in which marihuana was found, the court held that the requirement of knowledge that narcotics were being used cured any constitutional defects in the statute.

In *Calder*, the court found no abridgement of the right of association on the grounds that the statute "simply prohibits [one] from being present while narcotics are being used"²³ and does not prohibit mere association with any particular group. Moreover, the court went even further to justify the statute, saying:

the usual rule that mere knowledge or belief that a crime is being committed, or likely to be committed, coupled with the failure to take steps to prevent its commission does not constitute participation in the offense is inapplicable to persons present in an establishment where narcotics are being unlawfully used.²⁴

The *Lee* and *Calder* cases reflect a judicial desire to avoid defeating the legislative purpose of eliminating traffic in controlled substances. Nevertheless, as originally construed these statutes subjected persons to criminal liability just because companions, spouses, or casual acquaintances engaged in prohibited conduct in their presence.

For this reason, the California Supreme Court has recently directed its efforts to narrowing Sec. 11556 by distinguishing between "mere presence" at the time illegal activities occurred and "control over" those activities.

In the 1970 case of *People v. Cressey*,²⁵ which upheld a conviction for "presence" where defendant had control over the premises and, therefore,

²⁰ Mass. Gen. Laws Ann. Ch. 94 Sec. 213A.

²¹ *People v. Lee* 260 Cal. App. 2d 836, 67 Cal. Rptr. 709 (1968).

²² *People v. Calder* 6 Cal. App. 3d 931, 86 Cal. Rptr. 446 (1970).

²³ 86 Cal. Rptr. at 449.

²⁴ *People v. Cressey* 80 Cal. Rptr. 65, 70 (1969).

²⁵ 471 P.2d 19, 87 Cal. Rptr. 699 (1970).

the responsibility for preventing illegal drug use, the court stated:

A person of common intelligence would understand [that] Section 11556 by its plain meaning is designed for a person . . . who knowingly, willfully and intentionally involves himself with unlawful marihuana smoking or using. . . . As this Court has held, "if the defendant did not act to aid, assist, or abet" the perpetration of the crime, he is guilty of no violation of law from the mere fact that he was present . . . and knew of its commission. 471 P. 2d at 26-27.

This opinion has eliminated some objections to Section 11556 and to the earlier Cressey opinion because it immunizes from criminal liability individuals who find themselves in situations where marihuana is being used but over which they have no control (e.g., at the theatre, at a party or in a hotel lobby).²⁶

The District of Columbia's "presence" statute, which places the burden on the defendant to "give a good account of his presence in the establishment," has also been challenged. Its opponents argue that it gives too much discretion to the arresting officer and the court in deciding what constitutes a "good account."

A similar statute requiring an explanation of "good account" for presence in a *public* place (which is a typical loitering statute) was held unconstitutional for vagueness by the United States Court of Appeals for the District of Columbia.²⁷

This decision has not been expanded to cover the analogous "presence" statutes. Indeed, the District of Columbia Court of Appeals, in *United States v. McClough*,²⁸ specifically upheld the D.C. "presence" statute, stating that it was not vague because it did not penalize presence alone but rather "knowing presence" at a place where narcotics were being used. Unlike presence on a street corner, the Court held presence at an illegal establishment was "not presumptively innocent behavior."

Moreover, to avoid interpreting the defendant's silence as an admission of guilt, the court construed the "good account" requirement as an affirmative defense rather than as an element of the crime of "presence."

The former Massachusetts "presence" statute presented a greater encroachment upon individual freedoms than the preceding laws, and has been repealed. Prior to repeal it survived attack on constitutional grounds. Challenges to the Massachusetts law focused on the section punishing "who-

ever is in the company of a person, knowing that said person is illegally in possession of a narcotic drug," on the grounds that it violated the First Amendment's guarantee of freedom of association. In *Commonwealth v. Tirella*²⁹ the Massachusetts Supreme Court upheld this provision by construing it to require:

. . . proof of more than that the defendant was merely found in the same place with a person known by the defendant to possess narcotics. As the trial judge properly suggested in his charge, the words "in the company of" imply . . . companionship, friendly intercourse and the like.³⁰

Thus, by defining the elements of the offense to be (a) acquiescent association with one known to possess narcotics, and (b) an absence of prompt and adequate objection by the defendant to the illegal possession, the majority of the Court was able to hold the provision to be sufficiently clear and definite to overcome constitutional objections.³¹

In an interesting aside, the Court found the provision to be an appropriate object of legislative action:

We think that the Legislature may lawfully proscribe any substantial association with one illegally in possession of narcotics as a method of discouraging that serious evil and achieving social rejection of the illegal possessor, thus depriving him of any encouragement which may be given by acquiescent companionship.³²

Therefore, unlike the California Supreme Court's narrowing construction of Sec. 11556, the Massachusetts ban on presence at an illegal establishment was given a broad and sweeping interpretation. Consequently, the Massachusetts statute constituted a direct attack on the "drug culture." It made personal relationships between narcotics users and non-users criminal.

Until 1971, a Massachusetts college student who continued to reside with a roommate whom he knew illegally possessed marihuana had himself committed a crime, as had the spouse of a narcotics addict who continued to maintain the close proximity which the marital relationship entails.

New York has a narcotics "loitering" statute which parallels the "presence" statutes in other states.³³ A recent decision by a New York court considering the scope of the New York statutory provision against loitering for the purpose of unlawfully using or possessing a dangerous drug, has

²⁶ 249 N.E. 2d 573 (Mass. 1969).

²⁷ *Id.* at 575.

²⁸ On the other hand, a vigorous dissent by three of the seven judges characterized the statute as a "dragnet" permitting the arrest of persons who had neither committed nor intended to commit any violation of the law. *Id.* at 577.

²⁹ *Id.* at 576.

³⁰ Sec. 240.36 Revised Penal Law.

³¹ For a fuller analysis of *Cressey* see "No Place for Being in a Place: The Vanishing of Health and Safety Section 11556", 23 Stan. L. Rev. 1009 (1971).

³² *Ricks v. United States*, 414 F.2d 1111 (D.C. Cir. 1968).

³³ 268 A.2d 48 (D.C. App. 1970).

implications with regard to the interpretation of presence statutes. In that case, the court stated :

The mere fact that a pipe [containing a "spot" of hashish] was on the table is insufficient evidence upon which to conclude beyond a reasonable doubt that this defendant was loitering with others for the purpose of using or possessing a dangerous drug.³⁴

The court adopted a "totality of the circumstances" test to determine whether there had been a violation of the "loitering to use" statute.

Although the "presence" laws have generally been upheld, their enforcement raises the policy question of whether there is any adequate rationale for punishing innocent conduct which becomes criminal solely through the actions of others.

While courts have not been willing to find social segregation of marihuana users a *constitutionally unreasonable* legislative objective, it seems very improbable that this segregation has any substantial effect on the incidence of marihuana use. Rather, the actual effect of "presence" statutes to the extent they have been used is to allow the conviction of persons who are suspected users, but against whom there is insufficient evidence to sustain a conviction for possession.

As marihuana use has become socially acceptable in many private and public settings, "presence" statutes have an increasing potential for misuse and mistake. Some people will be convicted by "mistake"—the prosecution thinking that they are in fact users when they are not. Other people will be convicted by design in a genuine attempt to punish their mere association with marihuana users.

These convictions do not yield socially desirable results. Instead they raise the question whether the encroachments on personal freedom they entail is justified by the value of such statutes as aids in enforcement of the primary offenses of use and possession of marihuana.

The Uniform Act does not include a "presence" statute in its scheme for controlling drug use. For this reason it might be expected that states adopting the Act would repeal their "presence" laws as did Massachusetts.

As a matter of fact, however, both Nebraska and Iowa, which are Uniform Act states, have retained presence statutes assessing harsher penalties than do their possession provisions.³⁵ Iowa extended its law in 1971 to include not only presence at an illegal establishment but also transportation to and from such a place.

³⁴ *People v. L* 66 Misc. 191, 320 N.Y.S. 2d 456, 459 (1971).

³⁵ e.g., Oklahoma and South Dakota, both Uniform Act states also have such "presence" statutes but the penalties for violation may be lower than under the "possession" laws.

The existence of these penalties raises a question as to the rationality of certain approaches to marihuana control. Under the existing scheme in some states persons who merely associate with marihuana users may be subject to greater penalties than the users themselves.

C. Possession of Implements of a Crime

With the exception of the District of Columbia, the eight states having this category of ancillary offense specifically prohibit possession of an instrument or implement adapted for administering some form of illegal drugs.³⁶ Five states make a violation of this provision punishable as a misdemeanor whereas three states make it punishable as a felony.

A typical statute is Section 11555 of the California Health and Safety Code, which provides :

It is unlawful to possess an opium pipe or any device, contrivance, instrument or paraphernalia used for unlawfully injecting or smoking a narcotic.³⁷

The District of Columbia statute, on the other hand, is more general. It prohibits the possession of all instruments by which a crime can be committed including those associated with drug use.

No person shall have in his possession in the District any instrument, tool, or other implement for picking locks or pockets, or that is usually employed, or reasonably may be employed in the commission of any crime, if he is unable satisfactorily to account for the possession of the implement.³⁸

This law has withstood attacks on its constitutionality.³⁹ In the future challenges to paraphernalia or implements convictions will center on the likelihood of legitimate use of the implement⁴⁰ and whether or not defendant had dominion or control over the instrument in question.⁴¹

³⁶ Some possession statutes have been limited to "hard drug" paraphernalia such as syringes and hypodermic needles and are excluded from this analysis. New Jersey N.J.S.A.2A 170-77.5.

³⁷ Cal. Health & Safety Code Sec. 11555 (West 1964). Other states having similarly worded statutes include Indiana, Ind. Ann. Stat., Title 10 Par. 3520(b) ; Mississippi Controlled Substances Act. Par. 20(d) ; 63 Okl. Stat. Ann. Par. 2-405B and Texas, Texas Penal Code, Title 12, Art. 725(b) Par. (2) (b).

³⁸ D.C. Code Ann. Par. 22-3601.

³⁹ *Tompkins v. United States*, 272 A. 2d 100 (D.C. App. 1970).

⁴⁰ *McKoy v. United States*, 263 A. 2d 649 (D.C. App. 1970). These statutes have also been attacked without success to date on the theory that it is cruel and unusual punishment to penalize addicts for possession of implements necessary to support their addiction. (*Wheeler v. U.S.* 276 A. 2d 722 (D.C. App. 1971). These challenges offer no help to marihuana users.

⁴¹ *Brown v. State*, 481 P. 2d 475 (Okla. Ct. App. 1971) ; *State v. Chandler*, 467 P. 2d 127 (Ore. App. 1970) and *Culmore v. State*, 447 S.W. 2d 915 (Tex. Ct. App. 1969).

These statutes are convenient tools for the conviction of marihuana users where there is insufficient evidence of actual use or possession of marihuana. They are based on the assumption that only those who use or possess marihuana are likely to possess the prohibited paraphernalia. Even if the criminal law may legitimately rest on such assumptions, these laws may be applied overbroadly. The courts, therefore, generally require that the state show at least some connection between the prohibited paraphernalia and marihuana use.⁴²

Beyond the question of substantive propriety, these statutes raise additional problems. First, the possession of drug paraphernalia is punishable as a felony in Florida and Indiana even though the possession of a designated amount of marihuana is punishable as a misdemeanor.

Second, this law may be used to make harassment arrests of persons adopting a certain lifestyle disapproved by the police. By making the possession of "pipes and rolling paper" which may be used for legal purposes rather than as implements of marihuana use probable cause for arrest, they enable searches of individuals who would not otherwise be subject to search.

Finally, most state drug laws provide for forfeiture of property which is deemed directly or indirectly dangerous to health or safety or for which there is probable cause to believe that the property was used or intended to be used in violation of such laws. The use of these provisions provides a viable alternative to the criminal process.

In recognition of the substantial policy questions raised by the use of these ancillary offenses in marihuana cases, several legal studies have recommended their elimination, *e.g.*, The Committee on Drug Abuse of the American Bar Association Section on Criminal Law, 117. Cong. Rec. S14751 (September 22, 1971).

CONSTRUCTIVE POSSESSION

"Constructive possession" is a legal fiction which permits prosecutors to charge persons found in the vicinity of marihuana with its use or possession.

In most instances, constructive possession is a judicially created rule for applying the possession statute in a given jurisdiction. Occasionally this rule achieves the status of codification, as in Maryland, where the possession statute itself defines possession to include constructive as well as actual dominion and control.

However embodied, the notion of constructive possession expands the scope of the law against

possession. The elements of the crime of constructive possession are almost identical to those of actual possession, with one exception. To sustain either charge evidence must be produced as to the amount and whereabouts of the prohibited substance in question and as to the state of defendant's knowledge concerning its nature and whereabouts.

The proof of actual possession differs, however, because "dominion and control" must be shown; in constructive possession cases only a showing of "access" or "opportunity to exercise dominion and control" is necessary. The evidence submitted to prove these elements may be either direct or circumstantial.

All possession litigation is primarily concerned with establishing knowledge or lack of knowledge. The mere showing of proximity to an illegal drug is usually insufficient to support the inference of knowledge and hence a finding of constructive possession. *Montoya v. U.S.*, 402 F. 2d 847 (4th Cir. 1968).

The constructive possession rule seems to stem from the difficulty of proving actual possession in cases where the inference that there has been possession at a recent time is exceedingly strong. In some states the concept of constructive possession resembles a rebuttable presumption. In such states if one person admits actual possession no "constructive" charge will lie against another. *State v. Callahan*, 77 Wash. Dec.2d 26, 459 P2d 400 (1969). Proof of the other person's presence and access to the drug will not establish constructive possession in this circumstance.

However, with the development of judicial decision in this area, what was once a permissible legal inference has in some instances become automatic. In jurisdictions where this has happened, constructive possession is virtually the equivalent of a "presence" statute.

Whether a state's courts treat "constructive possession" merely as an evidentiary aid or presumption or as a prohibited act in itself, the concept is similar in function to that of the ancillary offenses available for use in controlled substance cases. Like these offenses, it often makes association with marihuana users punishable, and it is most useful where there is inadequate evidence of actual possession.

Unlike the ancillary offenses which are seldom used in marihuana cases, however, constructive possession frequently underlies a group arrest or a group prosecution.

The Commission's survey of the opinions and practices of prosecuting attorneys showed that in 68% of the jurisdictions represented by responding prosecutors, constructive as well as actual possession was prohibited, and that in 87% of these jurisdictions, the prosecutors made use of con-

⁴² *People v. Queen*, 322 N.Y.S. 2d 58, 60 (County Ct. 1971); *Fraher v. Superior Ct.*, 77 Cal. Rptr. 366, 370 (1969).

Penalty Provisions for ANCILLARY OFFENSES

State	Maintaining a Public Nuisance or Illegal Establishment	Presence in an Illegal Establishment	Possession of Implements of a Crime
ALABAMA	1st offense-Felony 2-15 yrs. a/o NMT \$25,000 2d & Subsequent offenses 4-30 yrs. a/o NMT \$50,000	1st offense-Misdemeanor: NMT 1 yr. 2d & Subsequent offenses Felony; 2-15 yrs. a/o NMT \$25,000	1st offense-Misdemeanor: NMT 1 yr. no fine 2d & Subsequent offenses- Felony 2-15 yrs. NMT \$25,000
ALASKA	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
ARIZONA	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
ARKANSAS	All offenses-Misdemeanor NMT 1 yr. a/o NMT \$25,000	NOT APPLICABLE	NOT APPLICABLE
CALIFORNIA	1st offense-Felony or Mis- demeanor; NMT 10 years state prison OR NMT 1 yr. in county jail. 2d & Subsequent offenses-Felony; 2-20 yrs.	All offenses-Misdemeanor \$30-\$500 a/o 15-180 days in county jail	All offenses-Misdemeanor; \$30-\$500 a/o 15-180 days in county jail
COLORADO	1st offense-Felony; NMT \$10,000 and 2-15 yrs. 2nd offense-NMT \$10,000 and 5-20 yrs. 3rd & Subsequent offenses- Felony; NMT \$10,000 and 10-30 yrs.	NOT APPLICABLE	NOT APPLICABLE
CONNECTICUT	1st offense-Felony; NMT \$1,000 a/o NMT 2 yrs. 2d & Subsequent offenses- NMT \$10,000 and 10-30 yrs.	NOT APPLICABLE	NOT APPLICABLE
DELAWARE	All offenses - Felony NMT \$3,000 a/o NMT 10 yrs.	NOT APPLICABLE	NOT APPLICABLE
FLORIDA	1st offense-Felony; NMT 5 yrs. a/o NMT \$5,000 2nd offense-NMT 10 yrs. a/o NMT \$10,000. 3rd & Subsequent offenses- NMT 20 yrs. and NMT \$20,000.	NOT APPLICABLE	1st offense-Felony; NMT 5 yrs. a/o NMT \$5,000 2nd offense- NMT 10 yrs. a/o NMT \$10,000 3rd & Subsequent- NMT 20 yrs. and NMT \$20,000.
GEORGIA	Disorderly House Ga. Code Ann. 26-2614 Misdemeanor NMT - 12 mos.	NOT APPLICABLE	NOT APPLICABLE

Penalty Provisions for ANCILLARY OFFENSES

State	Maintaining a Public Nuisance or Illegal Establishment	Presence in an Illegal Establishment	Possession of Implements of a Crime
HAWAII	All offenses-Misdemeanor NMT \$1,000 a/o NMT 1 yr.	All offenses-Misdemeanor NMT \$500 a/o NMT 1 yr.	NOT APPLICABLE
IDAHO	1st offense-Felony; NMT 1 year a/o NMT \$25,000 2nd & Subsequent offenses- NMT 2 yrs. a/o NMT \$50,000	NOT APPLICABLE	NOT APPLICABLE
ILLINOIS	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
INDIANA	All offenses-\$25-\$100 and (misdemeanor) NMT 6 mos.	All offenses-Misdemeanor \$25-\$100 - NMT 6 mo.	1st offense-Felony; NMT \$1,000 & 1-10 yrs. 2nd & Subsequent offenses; NMT \$2,000 and 2-15 yrs.
IOWA	1st offense-Felony; NMT 1 yr. state prison a/o NMT \$1,000 2nd & Subsequent offenses- NMT 3 yrs. a/o NMT \$3,000	NOT APPLICABLE	NOT APPLICABLE
KANSAS	All offenses-Misdemeanor NMT \$500 a/o NMT 1 month in county jail	NOT APPLICABLE	NOT APPLICABLE
KENTUCKY	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
LOUISIANA	All offenses-Misdemeanor; NMT 6 months a/o NMT \$500 must show knowledge All offenses-civil fine NMT \$1,500 independent of criminal proceedings	NOT APPLICABLE	NOT APPLICABLE
MAINE	NOT APPLICABLE	All offenses-Misdemeanor; NMT \$1,000 and NMT 11 mos.	NOT APPLICABLE
MARYLAND	1st offense-Felony; NMT 5 yrs. a/o NMT \$15,000 2nd & Subsequent offenses - Felony; NMT 10 yrs a/o NMT \$30,000.	NOT APPLICABLE	NOT APPLICABLE
MASSACHUSETTS	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
MICHIGAN	1st offense-Misdemeanor NMT 2 yrs. a/o NMT \$25,000 2d & Subsequent offenses - Felony; NMT 4 yrs. a/o NMT \$50,000	NOT APPLICABLE	NOT APPLICABLE
MINNESOTA	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
MISSISSIPPI	1st offense-Misdemeanor NMT 1 yr. a/o NMT \$1,000 2d & Subsequent offenses - Felony; NMT 2 yrs. a/o NMT \$2,000.	NOT APPLICABLE	1st offense-Misdemeanor; NMT \$500 a/o NMT 6 mos. 2d offense-Misdemeanor; NMT \$1,000 a/o NMT 12 mos.
MISSOURI	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
MONTANA	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE

Penalty Provisions for ANCILLARY OFFENSES

State	Maintaining a Public Nuisance or Illegal Establishment	Presence in an Illegal Establishment	Possession of Implements of a Crime
NEBRASKA	1st offense-Misdemeanor; NMT 30 days county jail a/o NMT \$500 2d & Subsequent offenses-Misde- meanor; NMT 60 days county jail a/o NMT \$1,000.	1st offense-Misdemeanor; NMT 30 days county jail a/o NMT \$500 2d & subsequent-Misde- meanor; NMT 60 days county jail a/o NMT \$1,000	NOT APPLICABLE
NEVADA	All offenses-Felony; 1-6 yrs. a/o NMT \$2,000	NOT APPLICABLE	NOT APPLICABLE
NEW HAMPSHIRE	All offenses-Felony; NMT 5 yrs. a/o NMT \$1,000	1st offense-Misdemeanor; NMT 6 months a/o NMT \$500 Subsequent offenses-Misde- meanor; NMT 1 yr. a/o NMT \$500	NOT APPLICABLE
NEW JERSEY	1st offense-High Misdemeanor; NMT \$25,000 a/o NMT 3 yrs. 2d & Subsequent-High Misdemeanor; NMT \$50,000 a/o NMT 6 yrs.	NOT APPLICABLE	NOT APPLICABLE
NEW MEXICO	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
NEW YORK	All offenses-Misdemeanor NMT 3 mos. a/o NMT \$500	Loitering to use; NMT 3 mos. a/o NMT \$500	Misdemeanor-NMT 1 yr.
NORTH CAROLINA	Felony if alleged intentional violation; 1st offense -1-5 yrs. + NMT \$5,000; 2d & Subsequent offenses 2-10 yrs. ; NMT \$10,000	NOT APPLICABLE	NOT APPLICABLE
NORTH DAKOTA	1st offense-Felony; NMT 1 yr. a/o NMT \$5,000 2d & Subsequent offenses; NMT 2 yrs. a/o NMT \$10,000	NOT APPLICABLE	NOT APPLICABLE
OHIO	1st offense-Felony; NMT \$500 or 1-5 yrs. 2d & Subsequent offenses-Felony; \$200-\$1,000 or 1-5 yrs.	NOT APPLICABLE	NOT APPLICABLE
OKLAHOMA	1st offense-Felony; NMT 5 yrs. and NMT \$10,000 2d & Subsequent offenses-Felony; NMT 10 yrs. and NMT \$20,000 [violation of M. I. E. provision with knowledge or intention] 1st offense-civil fine of NMT \$1,000 2d & Subsequent offenses-civil fine of NMT \$2,000 [violation w/o knowledge or intention shown]	NOT APPLICABLE	All offenses-Misdemeanor; NMT 1 yr. a/o NMT \$1,000 Conditional Discharge- for 1st offense possession may be applied once with respect to any person
OREGON	Misdemeanor; NMT 1 yr. a/o NMT \$1,000	Misdemeanor NMT 1 yr. a/o NMT \$1,000	NOT APPLICABLE
PENNSYLVANIA	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE

Penalty Provisions for ANCILLARY OFFENSES

State	Maintaining a Public Nuisance or Illegal Establishment	Presence in an Illegal Establishment	Possession of Implements of a Crime
	1st offense-Felony; NMT \$10,000 a/o NMT 15 yrs. 2d offense-NMT \$10,000. a/o NMT 20 yrs. 3rd & Subsequent offenses- NMT 30 yrs. a/o NMT \$10,000	All offenses-Misde- meanor; NMT \$300 or NMT 1 year	NOT APPLICABLE
RHODE ISLAND	Common Nuisance: 1st offense-Felony; NMT \$500 or NMT 5 yrs. 2nd & Subsequent offenses-NMT \$1,000 or NMT 5 yrs.		
SOUTH CAROLINA	All offenses-Felony; NMT 5 yrs. or NMT \$10,000 All offenses-civil fine NMT \$1,000	NOT APPLICABLE	NOT APPLICABLE
SOUTH DAKOTA	All offenses-civil fine NMT \$10,000 ["knowingly" maintaining common nuisance] All offenses-Felony; NMT 5 yrs. a/o NMT \$10,000	All offenses-Misdemeanor NMT 1 year county jail a/o NMT \$500	NOT APPLICABLE
TENNESSEE	All offenses-Felony-2-10 yrs. a/o NMT \$20,000	NOT APPLICABLE	NOT APPLICABLE
TEXAS	All offenses-Felony - 2 yrs. to life	NOT APPLICABLE	1st offense-Felony; 2 yrs to life 2d & Subsequent offenses- 10 yrs. to life
UTAH	1st offense-Misdemeanor NMT \$299 a/o NMT 6 months county jail 2d offense-Misdemeanor NMT \$1,000 a/o NMT 1 yr. county jail 3d & Subsequent-Felony; NMT 5 yrs.	1st offense-Misdemeanor NMT \$299 a/o NMT 6 months county jail 2d offense-Misdemeanor; NMT \$1,000 a/o NMT 1 yr. county jail 3d & Subsequent offenses- Felony; NMT 5 yrs.	NOT APPLICABLE
VERMONT	Common Nuisance prohibited but no penalty provision	NOT APPLICABLE	NOT APPLICABLE
VIRGINIA	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
WASHINGTON	1st offense-Felony; NMT 2 yrs. a/o NMT \$2,000 2d & Subsequent offenses-Felony; NMT 4 yrs. a/o NMT \$4,000.	NOT APPLICABLE	NOT APPLICABLE
WEST VIRGINIA	1st offense-Misdemeanor 6 mths. to 1 yr. county jail a/o NMT \$25,000 2d & Subsequent offenses-Felony; 1-2 yrs; \$50,000.	NOT APPLICABLE	NOT APPLICABLE
WISCONSIN	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE

Penalty Provisions for ANCILLARY OFFENSES

	Maintaining a Public Nuisance or Illegal Establishment	Presence in an Illegal Establishment	Possession of Implements of a Crime
WYOMING	1st offense-Felony or Misdemeanor NMT 1 yr. a/o NMT \$10,000 2d & Subsequent offenses-Felony NMT 2 yrs. a/o NMT \$20,000.	NOT APPLICABLE	NOT APPLICABLE
WASHINGTON, D. C.	1st offense-Misdemeanor; \$100- \$1,000 a/o NMT 1 yr. 2d & Subsequent offenses- \$500-\$5,000 a/o NMT 10 yrs.	All offenses-Misdemeanor NMT \$500 a/o NMT 1 yr.	Misdemeanor; NMT - 1 yr. a/o NMT \$1,000.
GUAM	1st offense-Felony; NMT 5 yrs. a/o NMT \$1,000 2d & Subsequent offenses-Felony; NMT 10 yrs. a/o NMT \$2,000 knowledge required 1st offense-Civil fine NMT \$1,000 2d & Subsequent offenses-Civil fine-NMT \$2,000-knowledge re- quired	NOT APPLICABLE	NOT APPLICABLE
VIRGIN ISLANDS	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
PUERTO RICO	Secretary of Health may take proper action to obtain a court order pro- hibiting the continuance of the unlawful situation	NOT APPLICABLE	NOT APPLICABLE

structive possession in order to prosecute offenders where there was only a likelihood of actual possession.

According to the law enforcement statistics collected by the Commission, most marihuana arrests are group arrests. Constructive possession has obvious utility in the group arrest situation. At a raided pot party, the participants hasten to rid themselves of incriminating evidence, leaving no one except the owner in actual possession.

Constructive possession makes it possible to make arrests in such cases or when a vehicle is stopped and marihuana is found but no one has or admits possession. In addition, where probable cause to search is based on one person's furtive gesture, the arresting officer in a constructive possession jurisdiction may consider other persons in the vicinity implicated in the furtive party's wrongdoing, and arrest them also.

In drug law enforcement, where the problems of proof are substantial, constructive possession is a useful aid to the prosecution. However, its use may result in abuse of discretion by prosecutors when they choose whom from among a group of arrestees to prosecute.

At one time there was also a possibility that persons without knowledge of the presence of marihuana could be penalized for constructive possession. Opponents of the rule claimed, for example, that the roommate of a girl in whose room marihuana was found could be prosecuted for con-

structive possession of marihuana, even though she did not know that the person with whom she shared her living quarters kept any marihuana on the premises.

This consequence has been almost entirely eliminated by court decisions which hold that "knowledge" is an essential element of possession. See, for example, *U.S. v. Bethea*, 442 F. 2d 790 (D.C. Cir. 1971) where the court held that mere proximity is not sufficient and that there must be some evidence of knowledge.

In that case a controlled drug was found in the rear of a car next to one passenger, and another passenger who was sitting in the front seat was arrested for its possession. The court suggested evidence that one passenger was the friend of the other or that they had spent a substantial part of the evening together would take the case of "constructive possession" to the jury. Absent such evidence the circumstances did not necessarily support the view that the front seat passenger had knowledge of the back seat passenger's possession.⁴³

⁴³ Although this case illustrates the direction taken by judicial opinions which do not favor the broad use of constructive possession, the other circumstances in the case might have led many courts to a different result. All passengers in the car had guns and the amount of heroin found in the back seat was sufficient for sale. In an aside the deciding court suggested that had narcotics paraphernalia rather than guns been present (although many sellers are not users) constructive possession would have been found.

In contrast to the lack of knowledge problem, which no longer is substantial, the prospect of abuse of discretion is very real.

The survey of District Attorneys shows that in deciding whom to prosecute in a group where no one has actual possession or admits possession, prosecutors are entirely on their own. Many prosecutors never prosecute anyone in such a situation. The choice of those who do, however, is not a uniform or consistent one.

Some prosecutors reported that they prosecuted one person for each cigarette or for each multiple of the statutory amount given "personal use" treatment. Other prosecutors said they only prosecuted those persons found within reach of the drug at the time of its seizure. In the case of vehicular arrests, some prosecutors were impressed with the location of the marihuana, others prosecuted everyone in the car even if the marihuana was hidden, for example, in the glove compartment.

In many cases a prosecutor's choice of whom to prosecute is apparently influenced by the attitude of the defendant and the prosecutor's own attitude toward marihuana users and their drug. Indeed, selective enforcement is necessitated by the constructive possession rule.

In addition, the courts are in conflict as to the applicability and meaning of the rule, which may lead to inequities in its use. As Judge Tamm said in his concurring opinion in the case of *United States v. Holland*, 445 F2d 701 (D.C. Cir. 1971):

The affirmative and negative rulings are in such obvious conflict that for the practitioner the problems are difficult to understand and apparently for the courts impossible to master. *Id.* at 703.

In his opinion, the confusion generated by the constructive possession concept results in much waste of trial and appellate time.

In recognition of this potential for abuse and of the questionable wisdom of a legal fiction which may permit the punishment of non-users in the same manner as users of marihuana, some courts have recently abandoned its use.

For example, a recent Pennsylvania case held that mere presence at the scene where marihuana is found and opportunity to join in its control are not sufficient to establish the requisite elements of the crime of possession. The court held that the described combination of circumstances was sufficient only to create a suspicion of guilt by association. *Commonwealth v. Florida*, 441 Pa. 534, 272 A2d 476, 478 (1971).

At this time, approximately one-quarter of the states have either abandoned the use of, or do not interpret possession to include, constructive possession in marihuana cases.

V. Marihuana Control at the Local Level

The extent to which marihuana is legally controlled at the local level is largely a function of history and of the constitutional relationship between the states and their respective political subdivisions.

In most states, cities and counties have only those legislative powers expressly delegated by the state legislature. Except insofar as the use and distribution of drugs directly affects the public order or public peace, the control of marihuana is generally beyond the legislative competence of the localities.

Whatever the scope of local power, however, it is clear that the local ordinance may not contravene the declarations of policy and provisions of law of the state statute. In addition, the constitutional preclusion of double jeopardy prohibits dual prosecutions by the state and city for the same offense. Unlike the relationship between the federal and state governments, there is only one sovereign power at the state level.

In those jurisdictions where the locality is empowered to supplement or duplicate the state statute and where the institutional responsibility of local prosecutors permits a choice between local or state process, it is possible for a local ordinance to play a significant role in the matrix of marihuana control.

THE SAMPLE

In order to obtain a general picture of the role of local ordinances in enforcement of the marihuana laws, the Commission conducted a telephone survey of a sample of 127 cities. The sample was selected primarily on the basis of population: at least one large city and one small town in each state. In states with several large urban areas, such as California, more cities were contacted. When a pattern became apparent, as in Michigan, additional localities were surveyed.

The city attorney, or comparable official, in each of the sample cities was asked to forward a copy of any applicable ordinance. In addition, if such an ordinance existed, the official was asked whether enforcement officials generally deferred to the state for prosecution or whether the local ordinance was utilized as a vehicle for prosecution.

CONCLUSIONS

1. More than three-fourths of the cities and towns in the sample have no local ordinance applicable to marihuana use, possession, distribution or cultivation. None of the sampled localities in 32 states had such an ordinance.

A SURVEY OF LOCAL MARIHUANA ORDINANCES

State	City	Population	Violation	Penalty	Enforcement
Alabama	Birmingham	300,910	None		
	Prichard	41,578	None		
Alaska	Anchorage	48,081	None		
	Juneau	6,050	Being under the influence of alcohol, narcotics or other drugs to a degree that may endanger others	\$500 and/or 30 days	Not Enforced/ Difficulty of Proof
Arizona	Flagstaff	26,117	None		
	Phoenix	518,562	None		
Arkansas	Little Rock	132,483	None		
	Texarkana	21,682	None		
California	Berkeley	116,716	None		
	Long Beach	358,662	None		
	San Francisco	715,674	None		
	San Diego	696,769	None		
	Los Angeles	2,816,061	None		
Colorado	Denver	515,678	None		
	Commerce City	17,407	None		
Connecticut	Waterbury	108,033	None		
	Woodstock	4,311	None		
Delaware	Milford	5,314	None		
	Wilmington	80,386	None		
Florida	Jacksonville	528,865	Peddle or sell any medicine, drug, liniment or other preparation	\$100 and/or 60 days	First offense/ small amount enforcement
			Possession, sale, prescription of any narcotic drug	\$450 and/or 75 days	
			Cultivation or the growing of narcotic drugs without having obtained a license	\$450 and/or 75 days	
			Presence in or the maintenance of an illegal establishment	\$450 and/or 75 days	
	Hallandale	23,849	None		
	Tampa	277,767	None		

State	City	Population	Violation	Penalty	Enforcement
Georgia	Atlanta	497,421	None		
	Cartersville	9,929	None		
Hawaii	Honolulu	324,871	None		
Idaho	Boise	74,990	None		
	Kellogg	3,811	None		
Illinois	Chicago	3,369,359	None		
	Rockford	147,370	None		
	Salem	6,187	None		
Indiana	Goshen	18,004	None		
	Indianapolis	745,739	None		
Iowa	Des Moines	201,404	None		
	Ft. Dodge	31,263	None		
Kansas	Kansas City	168,213	Driving under the influence of any narcotic drug or any other drug	1st offense: \$100-\$500 and/or 3 mos. 2nd & subsequent offenses: \$500 and/or 6 mos. and suspension of license	Not enforced/difficulty of proof
			Possession, sale, prescription, or administration of marihuana (or other drugs)	\$500 and/or 90 days for each violation	First offense/small amount enforcement
	Liberal	13,789	None		
	Lawrence	45,698	None		
Kentucky	Louisville	361,958	Holder of a liquor license shall not permit the keeping, smoking or sale of "nuggles" or marihuana weeds.	Revocation of license	No local enforcement/historical anachronism
	Williamsburg	3,867	None		
Louisiana	New Orleans	593,471	None		
	Ville Platte	9,692	None		
Maine	Bangor	33,168	None		
	Pittsfield	3,398	None		
Maryland	Westminster	7,207	None		
	Baltimore	905,759	None		

State	City	Population	Violation	Penalty	Enforcement
Massachusetts	Boston	641,071	None		
	Falmouth	16,000	None		
	New Bedford	101,777	None		
Michigan	Redford Township	1,500	Possession, sale, gift, distribution, administration, prescription of any of the hypnotic or hallucinatory drugs (or other drugs).	<u>All violations</u> \$100 and/or 90 days	
			Possession, sale or gift of narcotic paraphernalia		No local enforcement
			Presence in or the maintenance of an illegal establishment		
	Dearborn	104,199	Possession, sale, distribution, administration, prescription or gift of dangerous drugs (or other drugs).	<u>All offenses</u> \$500 and/or 90 days	
			Possession, sale, gift or the buying or receiving of narcotic paraphernalia		First offense / small amount enforcement
			Presence in or the maintenance of an illegal establishment		
	Berkeley	21,879	Possession, sale, distribution, administration, prescription or gift of any hypnotic or dangerous drugs (or other drugs)	<u>All violations</u> \$500 and/or 90 days	
			Possession, sale or gift of narcotic paraphernalia		First offense / small amount enforcement
			Presence in or the maintenance of an illegal establishment		
	Grosse Point Farms	12,500	Possession, sale, distribution, administration, prescription or gift of cannabis, commonly called marihuana (or other drugs)	<u>All violations</u> \$500 and/or 90 days	
			Possession, sale, or gift of narcotic paraphernalia		First offense / small amount enforcement
			Presence in or the maintenance of an illegal establishment		
	Ann Arbor	99,797	Possession of marihuana or cannabis	\$500 and/or 90 days	First offense / small amount enforcement

State	City	Population	Violation	Penalty	Enforcement
Michigan Cont'd.	Grosse Pointe Shores	3,042	Possession, sale, distribution, administration or gift of cannabis, sativa, commonly called marihuana (or other drugs)	<u>All violations</u> \$100 and/or 90 days	
			Possession, sale or gift of narcotic paraphernalia		First offense/ small amount enforcement
			Presence in or the maintenance of an illegal establishment		
	Warren	179,260	Possession, sale, distribution, administration, prescription or gift of any of the hypnotic or dangerous drugs (or other drugs)	<u>All</u> \$100 and/or 90 days	
			Possession, sale or gift of narcotic paraphernalia		First offense/ small amount enforcement
			Presence in or the maintenance of an illegal establishment		
	Detroit	1,512,893	Possession, sale, distribution, administration, prescription or gift of cannabis, commonly called marihuana (or other drugs)	<u>All</u> \$500 and/or 90 days	
			Possession, sale or gift of narcotic paraphernalia		Major tool of enforcement except in cases of large scale trafficking
			Presence in or the maintenance of illegal establishment		
	Livonia	110,109	Possession, sale, distribution, administration, prescription or gift of any of the hypnotic or dangerous drugs (or other drugs)	<u>All</u> \$500 and/or 90 days	First offense/ small amount enforcement
			Possession, sale or gift of narcotic paraphernalia		
			Presence in or the maintenance of an illegal establishment		

State	City	Population	Violation	Penalty	Enforcement
Michigan Cont'd.	Grosse Point Woods	25,000	Possession, sale, distribution, prescription or gift of cannabis, commonly called marihuana (or other drugs)	<u>All</u> \$500 and/or 90 days	First offense/ small amount enforcement
			Possession, sale or gift of narcotic paraphernalia		
			Presence in or the maintenance of an illegal establishment		
	Harper Woods	20,186	Possession, gift or use of cannabis, commonly known as marihuana (or other drugs)	<u>All</u> \$500 and/or 90 days	First offense/ small amount enforcement
			Possession or gift of narcotic paraphernalia		
			Presence in or the maintenance of an illegal establishment		
	Birmingham	26,170	Possession or the use of marihuana or cannabis	<u>All</u> \$500 and/or 90 days	Major tool of enforcement except in cases of large scale trafficking
			Possession, sale or gift of narcotic paraphernalia		
			Presence in or the maintenance of an illegal establishment		
Minnesota	Minneapolis	434,400	Possession, sale, administration, or prescription of any cannabis indica or cannabis sativa or marihuana (or other drugs)	<u>All</u> \$300 and/or 90 days	No local enforcement
			Possession or sale of narcotic paraphernalia		
	Shoreview	10,995	None		
Mississippi	Jackson	153,968	Driving under the influence of marihuana (or other drugs)	\$300 and/or 90 days	No local enforcement
	Lexington	2,756	None		
Missouri	Kansas City	507,330	Possession, administration, sale, gift, use of cannabis indica, marihuana or hasheesh (or other drugs)	<u>All</u> \$1-\$500 and/or 1 day-6 mos.	Little local enforcement
			Being under the influence of any narcotic drug		
	St. Louis	622,236	None		
	Springfield	120,096	None		

State	City	Population	Violation	Penalty	Enforcement
Montana	Billings	61,581	None		
	Shelby	3,111	None		
Nebraska	West Point	3,385	None		
	Omaha	346,929	Driving under the influence of any drug (or liquor)	1st offense \$100 and/or 3 mos. 2nd & more \$300 and/or 3 mos.	Not enforced/ difficulty of proof
			Being under the influence of alcohol, a narcotic or other drug to the degree that he may endanger himself or others or property	\$500 and/or 6 mos.	
Nevada	Henderson	16,395	None		
	Las Vegas	125,787	None		
New Hampshire	Manchester	87,754	None		
	Rye	4,083	None		
New Jersey	Elizabeth	112,654	None		
	Glen Rock	13,011	None		
New Mexico	Albuquerque	243,751	None		
	Truth or Consequences	4,656	None		
New York	Buffalo	462,768	None		
	Ft. Plains	2,809	None		
	New York	7,895,563	None		
North Carolina	Dunn	8,302	None		
	Charlotte	241,178	Being under the influence of any drug in a public place	\$50 and/or 30 days	No local enforcement

State	City	Population	Violation	Penalty	Enforcement
North Dakota	Fargo	53,365	None		
	Mayville	2,554	Possession or sale of marihuana Maintenance of illegal establishment	<u>All</u> \$1,000 and/or 6 mos. - 1 yr.	No local enforcement
Ohio	Cincinnati	452,524	None		
	Cleveland	750,879	None		
	Parma	100,216	None		
	Yellow Springs	4,624	None		
	Columbus	540,025	Possession or use of a hallucinogen in any form (cannabis, commonly known as marihuana, hashish, ganja, or bhang) Presence in or the maintenance of an illegal establishment	<u>All</u> \$300 and/or 90 days	Substantial local enforcement
Oklahoma	Oklahoma City	368,856	None		
	Muskogee	37,331	None		
Oregon	Portland	380,623	Possession, transportation, sale, prescription, administration of any narcotic drug Presence in or the maintenance of an illegal establishment Being under the influence or use of narcotic drugs	<u>All</u> \$500 and/or 6 mos.	No local enforcement
	Woodburn	7,495	Possession, sale or use of a narcotic or dangerous drug	\$500 and/or 90 days	No local enforcement
Pennsylvania	Erie	129,321	None		
	Northampton	8,389	None		
	Pittsburgh	520,117	None		
	Philadelphia	1,950,098	None		
Rhode Island	Providence	179,116	None		
	Charlestown	2,863	None		

State	City	Population	Violation	Penalty	Enforcement
South Carolina	Columbia	113,543	None		
	Hampton	2,845	None		
South Dakota	Sioux Falls	72,488	Driving while intoxicated or under the influence of liquor or any exhilarating or stupefying drug	<u>1st offense</u> \$50-\$300 and/or 10-90 days <u>2nd or more</u> \$100-\$500 and/or 30 days-6 mos.	Not enforced/ difficulty of proof
	Brookings	13,717	None		
Tennessee	Alcoa	7,739	Driving while under the influence of narcotic drugs (or other drugs)	\$50	Not enforced/ difficulty of proof
	Nashville-Davidson	447,877	Sale or gift of marihuana (or other drugs)	\$50 maximum	
			Possession of narcotic paraphernalia		No local enforcement.
			Maintenance of an illegal establishment		
			Being under the influence of a narcotic drug in any public place		
Texas	El Paso	322,261	Possession, sale, exchange or gift of any marihuana or Indian Hemp	\$200	No local enforcement/ historical anachronism
	Eagle Pass	15,364	Possession or the smoking of marihuana within city limits	\$200	Enforced until challenged
	San Antonio	654,153	None		
	Houston	1,232,802	None		
	Dallas	844,401	None		
Utah	Salt Lake City	175,885	Driving while under the influence of any narcotic drug or any other drug	\$100-\$299 and/or 30 days-6 mos.	Not enforced/ difficulty of proof
	Brigham City	14,007	None		
Vermont	Burlington	38,633	None		
	Woodstock	2,608	None		
Virginia	Newport News	138,177	None		
	Salem	21,982	None		

State	City	Population	Violation	Penalty	Enforcement
Washington	Seattle	530,831	Being under the influence of any narcotic drug including marihuana (or other drugs)	<u>All</u> \$500 and/or 6 mos.	
			Possession, sale or gift of any narcotic drug, including marihuana (or other drug)		First offense/ small amount enforcement
			Presence in or the maintenance of an illegal establishment		
	Lynnwood	16,919	Habitual use of marihuana (or other drugs) (constitutes vagrancy)	\$100 and/or 30 days	No local enforcement
West Virginia	Vienna	11,549	None		
	Wheeling	48,188	None		
Wisconsin	Franklin	12,247	None		
	Milwaukee	717,372	None		
Wyoming	Cheyenne	40,914	None		
	Rock Springs	11,657	None		

2. In Michigan, each of the 12 localities contacted had substantive offenses practically coextensive with state law. Such ordinances are designed to give local prosecutors some flexibility in dealing with marihuana and other drug offenders as a local problem. In addition, the penalty provisions are much more lenient than the state statute, and the ordinances are therefore used as an ameliorative alternative to state law.

This unusual development ensued when the Attorney General suggested in 1970 that he would not intervene upon passage of such ordinances if "special circumstances" were shown. Apparently, uneasiness with the harshness of state law was a circumstance "special" enough to warrant adoption of coextensive controls. Telephone interviews with city attorneys in the 12 localities revealed that the local ordinances are most often used in the prosecution of first offenders.

3. To the extent that local ordinances, apart from those in Michigan, pertain to marihuana, they often relate to public offenses, an area traditionally within local purview. Thus, outside of Michigan, 21 jurisdictions proscribe some marihuana-related activity. Nine do *not* proscribe directly the sale or possession of marihuana. Seven proscribe only being under the influence of the drug, driving under its influence or some varia-

tion on this theme. Since no method is currently available for detecting the presence of cannabis in the body, those ordinances are not enforced.

One additional locality, Louisville, Kentucky, prohibits the holder of a liquor license from permitting his clientele to smoke or sell "muggles" or "marihuana weeds." Not surprisingly, this ordinance, which predated the Kentucky legislation adopted in the 1930's, is not enforced today. Finally, one locality proscribes the status of being an habitual drug user. Probably unconstitutional, this ordinance also remains unenforced.

4. In 12 of the surveyed local jurisdictions outside of Michigan, the local ordinances proscribe directly the possession and/or sale of marihuana. In half of these jurisdictions, there is no local enforcement at all. In Kansas City, Missouri, the local offense is utilized sporadically and in Eagle Pass, Texas, the ordinance was employed often in the early months of 1971 as an alternative to the harsh state law until the legality of this practice was challenged.

Interestingly enough, the language of three of these eight unenforced ordinances suggests that they, like the Louisville ordinance, are historical anachronisms, having been adopted during the early stages of marihuana's legal history before the adoption of state statutes (Kansas City, Missouri; Eagle Pass, Texas; and El Paso, Texas).

Four cities (Jacksonville, Florida; Kansas City, Kansas; Columbus, Ohio; and Seattle, Washington) follow the Michigan pattern, utilizing the local ordinance as a speedy, lenient alternative to state law.

In these cities, as in Michigan, a traditional analysis of enforcement of the marihuana laws would have missed the boat entirely. In these areas, marihuana control is a local enterprise where the exercise of prosecutorial discretion is formalized by a choice of substantive devices.

VI. Analysis of Statutes Requiring Physicians To Report Drug Addiction*

The laws of 17 states impose varying requirements on physicians to report evidence of illicit drug use or dependence to governmental agencies. Although such provisions are generally relevant to the opiates rather than to marihuana, the Commission considers review of such statutes to be a matter of some urgency. The laws of 33 states impose no reporting obligation. An analytical discussion of the utility and desirability of such statutes must begin by noting that comparison. The absence of such a requirement from the statute books of two-thirds of the states suggests that the vast majority of jurisdictions believe these laws to be neither useful nor desirable.

Before proceeding to any discussion of utility or desirability, a review of the existing state statutes is in order. The statute of one state, Virginia, requires notification to the licensing board in cases where a physician treating a fellow physician feels that the drug addiction of the latter makes his continuation in practice dangerous to his patients or the public. This is such a limited notification requirement that, while noting its existence, this section will not hereafter include the Virginia statute in comparative discussions. Therefore, the review will be limited to the statutes of 16 states.

COMPARISON

No common pattern emerges in comparing these 16 laws. It is obvious that no unanimity of thought, and in fact little agreement, exists in the several policy areas material to this legislative requirement. The laws of three states, Hawaii, New York and North Carolina, seem to spring from a common source or from each other, but otherwise the laws appear to have been written

independently, without regard to the experience or statutory language of other states.

Physician's involvement: Thirteen states impose the reporting requirement when a physician is engaged in "treating" the subject of the report.

There are two kinds of "treatment", however, which initiate the requirements. In nine states (California, Idaho, Iowa, Massachusetts, Montana, Nebraska, New Mexico, Pennsylvania and Vermont) the physician must be treating the subject for his addiction to be obligated to report. In Hawaii, New York, North Carolina and Washington, the treatment need not be related to the addiction.

Three states set the physician's obligation at a lesser level of involvement. Michigan requires the report if, upon examination, the physician finds the subject to be addicted. Connecticut and New Jersey require only an "opinion" and a "determination" of addiction, respectively, to obligate the physician to report.

Who is notified: In most cases, the report must be submitted to the state health agency. This is the case in 11 states: California, Connecticut, Hawaii, Iowa, Massachusetts, New Jersey, New Mexico, New York, North Carolina, Pennsylvania and Vermont. In Michigan and Washington, the report must be submitted to the local health agency if one exists; otherwise, it must go to the state health agency.

Idaho is unique in requiring submission of the report to the state board of pharmacy. In both Montana and Nebraska, the report must be sent to the county attorney.

Time period for notification: The lack of interrelationship of these laws from one state to another is perhaps most apparent in the diversity shown by the several laws in setting (or not setting) a time period within which the report must be filed. Two states set no time period (Connecticut and Michigan), and five employ a general term such as "promptly" (Hawaii, New York, North Carolina and Vermont) or "immediately" (Washington).

Of the nine states establishing specific time periods within which the report must be filed, three set relatively long ones. New Mexico requires it to be filed after three months of continuing treatment. Iowa requires cumulative filing in quarterly reports. Pennsylvania also requires cumulative filing, but in annual reports.

The remaining six states specify relatively short time periods, ranging up to five days, within which the physician must report. New Jersey requires notice within one day after determining drug dependency. Montana requires the physician to re-

*This section was prepared for the Commission by Michael R. Vaughan, Director of Legislative Attorneys, State of Wisconsin Legislative Reference Bureau.

port within two days after prescribing or otherwise giving a drug. In Massachusetts, the physician must report within three days after the first treatment. Nebraska directs the physician to report within five days after each administering of drugs. California and Idaho also require reports within five days, but only after the first treatment.

Notification to include patient's name: There is general agreement among the several statutes that the physician's report must include the patient's name. Twelve of the 16 states specify that the name is to be included. The statutes of two other states (Michigan and New Jersey), imply that the name is to be included in the report. Only two states specify that the name "shall not be reported" (Iowa) or do "not require" the listing of the name (Vermont).

Confidentiality of report: Since the several statutes were enacted for different purposes in different states (e.g., to assist law enforcement officers, to provide state supervision of drug treatment, to assist in health statistic compilation), it is not surprising that the 16 laws vary greatly in their approach to holding the physicians' reports open or confidential.

The pertinent statutes in California, Idaho, Michigan, New Mexico and Washington do not speak to this point, though general statutes on public records may be applicable.

In Connecticut, New Jersey, New York and Pennsylvania, the reports must be held confidential except for health purposes. Hawaii and North Carolina stipulate the confidentiality of these reports except to health and law enforcement personnel.

Three states (Massachusetts, Montana and Nebraska) specify that the physicians' reports are open for general use. In two other states, the reports are open by specific statement (Iowa) or by implication (Vermont), but confidentiality is protected by virtue of the exclusion of patients' names from the reports.

Unique provisions: The laws of three states contain provisions, each unique to that state, which warrant reference in this comparison:

Connecticut specifies that physicians submitting reports "in good faith [are] immune from any civil or criminal liability that otherwise might be incurred" from making the report.

Montana requires physicians to submit their report to the county attorney. The statute further requires the county attorney "upon receipt of such notice to immediately file a complaint" against the patient.

Nebraska permits a physician to administer drugs to a user only "when it has been in good

faith determined by two reputable and duly licensed practicing physicians, in consultation, to be absolutely necessary in the medical treatment" of the patient.

ANALYSIS

As the introduction to this report noted, the most important fact to keep in mind regarding these statutes is that two-thirds of the states do not have them.

One must make a basic assumption that the effectiveness of these laws has not been demonstrated (if anything, the reverse is demonstrated) when only one-third of the states have chosen to enact such legislation. Statistically, the states which have enacted this requirement have a drug abuse problem which is just as great as comparable states which have not enacted it (though it is impossible to assess a suggestion that the drug abuse problem might be worse in the enacting states if these laws were not on the books).

Thus, statistical evidence does not demonstrate the utility of such laws, and other factors must be explored to evaluate their desirability. Let us examine the principal reasons why states would enact this kind of legislation.

Law enforcement tool: Several states either provide for submission of the physician's report to law enforcement officers or stipulate its availability to such officers. One state makes the point very clear by providing for submission to the county prosecutor who is directed immediately to bring criminal charges against the patient.

All this is self-defeating. If it is assumed that the basic point of governmental involvement with individual drug users is to assist them in overcoming their reliance on drugs, it appears contradictory to establish requirements which tend to result, directly or indirectly, in the criminalization of those seeking treatment for their problem. This is precisely the group of drug users who should *not* be prosecuted.

Further, it is difficult to reconcile the long-held concept of the confidential nature of the physician-patient relationship with such statutes. One must wonder how many physicians fail to comply with reporting requirements, knowing the potential effect of compliance on their patients.

Absent a demonstration of increased control over drug traffic resulting from these laws (and keeping in mind that statistical information suggests that no such control exists), it appears that such legislation is not an effective law enforcement tool.

Public health purpose: The several state laws which provide for submission of the report to state

or local health agencies, or for varying degrees of confidentiality, indicate an intent to use the information for a public health purpose. While meritorious, the quality of information derived from these reports is highly questionable. More important, however, is the fact that no identifying information is required for statistical purposes.

Protection of individual: Each of these laws may contain, some intentionally and others incidentally, an element of protection to individual drug users and to society generally.

One may argue that the governmental involvement represented by the reporting requirement is an essential detection device in a highly scientific area. It may be further suggested that society has made its policy decision to prohibit certain uses of certain drugs, and that physicians—both in treatment and in examination—are best equipped to take note of and report on violations of these prohibitions.

Again, disadvantages appear to outweigh any real benefit to society or the individual in this area. Requiring reports of physicians ignores the fact that they are not policemen and should not become informant tools of law enforcement agencies. Moreover, many of the laws do not extend to all the substances susceptible to abuse.

Lastly, in requiring physicians to report, these laws merely establish and burden the physician unnecessarily, without achieving any legitimate social purpose.

An individual's health is better protected by the personal care of private physicians than by the paternal concern of his government. And the professional integrity of the physician is best served by the confidentiality which he swears to uphold in the Hippocratic Oath.

CONCLUSION

Detailed examination of those state laws which impose some obligation on physicians to report cases of drug abuse to public agencies has revealed several major points. These laws vary greatly in purpose and design. They serve no worthwhile public goal, whether that goal be assistance in law enforcement, the furtherance of public health or protection of the individual. Fully two-thirds of the states have not chosen to enact such legislation.

Legislation does not justify itself by its mere existence. Law-makers enact laws in the expectation that their promulgation will work some public good; those governed under the law expect no less. These reporting laws fail to achieve any public good and in their harsher forms, they work positive harm. Such legislation should be repealed.

The pertinent laws of the 17 states requiring physicians to report cases of drug addiction to governmental agencies follow. The statutory text is current through at least December 31, 1970.

Deering's California Codes, Health and Safety Code, 11395

11395. Reports to division. The physician prescribing, furnishing, or administering any narcotic or methadone in the treatment of an addict for addiction shall within five days after the first treatment report by registered mail, over his signature, to the state division stating the name and address of the patient, and the name and quantities of narcotics prescribed.

The report shall state the progress of the patient under the treatment.

The physician shall in the same manner further report on the 15th day of the treatment and on the 30th day of the treatment, and thereafter shall make such further reports as are requested in writing by the state division.

Connecticut Revised Statutes, 19-48a

19-48a. Reports of drug-dependent persons. Each practitioner of the healing arts shall report to the commissioner of health the full name, address and date of birth of every person who, in his opinion, is a drug-dependent person dependent upon controlled drugs, as defined in section 19-443. Practitioners making such reports in good faith shall be immune from any civil or criminal liability that otherwise might be incurred from the making of such report. No such report or the information therein shall be admissible in any criminal prosecution or used for other than rehabilitation, statistical or medical purposes and each such report shall be held confidential by the commissioner.

Hawaii Revised Statutes, 329-23

329-23 Reports by physicians, penalty. Every attending or consulting physician shall report to the department of health, promptly, the name and, if possible, the address of any person under treatment if it appears that the person is an habitual user of narcotic drugs. The reports shall be open for inspection only to federal, state, county, and municipal officers whose duty is to enforce the laws of the State or of the United States relating to narcotic drugs, or who are concerned with the commitment, care, treatment, or rehabilitation of persons addicted to the use of

narcotic drugs. Any physician failing to make the report required by this section shall be fined not more than \$500.

Idaho Code Annotated, 37-3107

37-3107. Physician's duty to report treatments of addicts. The physician treating an addict for addiction shall within five (5) days after the first treatment report by registered mail, over his signature, to the board of pharmacy, stating the name and address of the patient, and the name and quantities of narcotics, if any, prescribed.

The report shall state the progress of the patient under the treatment.

The physician shall in the same manner further report on the fifteenth (15th) day of the treatment and on the thirtieth (30th) day of the treatment, and thereafter shall make such further reports as are requested in writing by the board of pharmacy.

Iowa Code Annotated, 224A.5

224A.5 Statistical report quarterly. Every medical practitioner or hospital that provides treatment or rehabilitation services to a person addicted to or dependent upon drugs, shall each quarter of every year, make a statistical report to the commissioner of public health in such form and manner as the commissioner shall prescribe for each such person treated or to whom rehabilitation services were provided during the preceding quarter. The form of the report prescribed shall be furnished by the commissioner of health and be so designated that a carbon copy will be available which shall be sent quarterly to the narcotics law enforcement division of the state, such report not to include doctors signature. The name or address of any person treated or to whom rehabilitation services were provided shall not be reported. Such report shall include the number of persons treated or to whom rehabilitation services were provided; the county of such person's legal settlement; the age of such person; the medication prescribed, if any; number of such persons treated as inpatients and the number treated as outpatients; the number treated who had received previous treatment or rehabilitation services; the number of such persons who maintained their employment while receiving treatment or rehabilitation services; the number of such persons who themselves or their family received public assistance during such treatment or rehabilitation and the type of public assistance received; and any other data required by the commissioner. If treatment or rehabilitation services are provided to a person by a hospital, public agency, nonprofit agency or corporation, such hospital, agency or nonprofit corporation shall coordinate with the treating medical practitioner so that the statistical reports required in this section shall not duplicate one another. The commissioner

shall cause all such reports to be compiled into quarterly reports which shall be a public record. The names and addresses of the reporting medical practitioners or hospitals shall not be a public record unless authorized by the person or entity filing the report.

Annotated Laws of Massachusetts, ch. 94, secs. 210A and 212B (sections have identical text)

210A. Statement to Be Furnished by Physician or Hospital Treatment Persons Suffering from Chronic Use of Narcotic Drugs. Every physician and every hospital treating persons suffering from the chronic use of narcotic drugs shall within seventy-two hours of the first treatment therefor furnish the department of public health with a statement in duplicate containing the name, address, height, weight, date of birth, color of eyes, color of hair, the date treated, and the name of the narcotic drug the patient used or suffered from. Such information shall be made available for the use of any agency of the commonwealth or of the United States which may require it.

212B. Physicians and Hospitals to Furnish Department of Public Health Certain Information Concerning Certain Narcotic Drug Users. Every physician and every hospital treating persons suffering from the chronic use of narcotic drugs shall within seventy-two hours of the first treatment therefor furnish the department of public health with a statement in duplicate containing the name, address, height, weight, date of birth, color of eyes, color of hair, the date treated, and the name of the narcotic drug the patient used or suffered from. Such information shall be made available for the use of any agency of the commonwealth or of the United States which may require it.

Michigan Compiled Laws Annotated, 335.204

335.204 Report by physician of drug users. Every practicing physician in the state who shall examine any person and find that such person is addicted to the use of narcotic drugs shall make a report thereof to the health officer of the county, city, township or district in which such person is a resident, or to the state health commissioner when there is no local health officer.

Revised Codes of Montana, 66-1516

66-1516. Physicians to report prescriptions issued to drug addicts. A duly licensed physician duly licensed to practice medicine in Montana, who prescribes for, dispenses, administers, or in any manner gives any of the drugs mentioned in this act, to a person known to him or believed by him to be an habitual user or a drug addict, shall, within forty-eight hours, report to the county attorney of the county in which said physician prescribes for,

dispenses, administers, or in any manner gives any of the drugs mentioned in this act, the name, address, physical and mental condition, and any necessary substantial information regarding such person. "An habitual user of such drugs" or "drug addict" is defined as follows: "Any person who has needed or demanded the prescribing for, dispensing or administering, or in any manner the giving of opium or coca leaves or any of their derivatives, salts, preparations, or compounds, at more or less regular intervals for thirty consecutive days prior to the day such person applies to a physician or to a physician of any institution for the prescribing for, dispensing, administering, or the giving in any way of any such drugs or their derivatives." If a physician shall prescribe for, dispense, administer, or in any manner give any of the drugs mentioned in this act, daily for more than thirty days to a patient, such physician shall register with the county attorney the name of such person, together with a statement of the physical and mental condition of such person, and a prognosis as to the probable future necessity for continuing the prescribing, dispensing, administering, or the giving of such drugs to such patient, and such prognosis shall include an estimate as to the length of time which, according to the judgment of the physician, will be required to remove the necessity of administering the aforesaid narcotic drugs to such patient. It shall be the duty of the county attorney upon receipt of such notice to immediately file a complaint against such habitual user of drugs or drug addict in the district court of his county.

Nebraska Revised Statutes, 28-427

28-427. Narcotic drugs; administration to addicts; record. It shall be unlawful for any duly licensed practicing physician to prescribe, or for any duly licensed practicing physician, dentist or veterinarian, to administer, in any manner or form, any cocaine, alpha or beta eucaine, morphine or opium, or any salt, compound or derivative of any of the foregoing substances, or any preparation, product or compound, containing any of the foregoing substances or any of their salts, compounds or derivatives, for, or to, any person addicted to the habitual use of cocaine, alpha or beta eucaine, morphine or opium, or any salt, compound or derivative of any of the foregoing substances, or any preparation, product or compound containing any of the foregoing substances or any of their salts, compounds or derivatives, except that a reputable and duly licensed practicing physician may personally administer to a patient who is an habitual user of such drugs, or any of them, necessary doses thereof, when it has been in good faith determined by two reputable and duly licensed practicing physicians, in consultation, to be absolutely necessary in the medical treatment of such patient; in which case, the physician administering such drugs, or any of them, shall make and keep a record in writing of the name and address of the person to whom such drugs, or any of them, were administered, the date administered, the form and quantity of drug administered, the name and address of the consulting physician, and the date and place of consultation. Such record shall be retained and preserved

within the State of Nebraska, and the county where administered, for a period of at least two years, and shall always be open for inspection by the Department of Health, state, county and city health officers, county attorneys, grand juries, and all officers of the law, and by agents appointed by them, or any of them, for the purpose of making an inspection. The record shall be made at the time of each administering of such drugs, or any of them, and a copy of the record shall, within five days after each administering of such drugs, or any of them, as in this section provided, be filed with the county attorney of the county in which the administering took place, by the physician administering the drugs, or any of them, and shall have affixed thereto the signature and address of the administering physician.

New Jersey Statutes Annotated, 24:21-39

24:21-39. Reports by practitioners of drug dependent persons. Every practitioner, within 24 hours after determining that a person is a drug dependent person by reason of the use of a controlled dangerous substance for purposes other than the treatment of sickness or injury prescribed and administered as authorized by law, shall report such determination verbally or by mail to the Commissioner of the State Department of Health. Such a report by a physician shall be confidential and shall not be admissible in any criminal proceeding. The commissioner, in his discretion, may also treat any other reports submitted under this section as confidential if he determines that it is in the best interest of the drug dependent person and the public health and welfare. A practitioner who fails to make a report required by this section is a disorderly person.

New Mexico Statutes Annotated, 54-7-11 (1)

54-7-11. Professional use of narcotic drugs. (1) A physician or a dentist, in good faith and in the course of his professional practice only, may prescribe, administer, and dispense narcotic drugs, or he may cause the same to be administered by a nurse or intern under his direction and supervision. Provided, however, that if said physician is required to use any of the drugs prohibited by this act in the care and treatment of any individual case for a period longer than three [3] months, he shall at the expiration of said period of three [3] months report the same to the state board of public welfare [state board of public health], together with the name of the patient and the nature of the disease with which said patient is afflicted.

McKinney's Consolidated Laws of New York Annotated, Public Health Law, 3344

3344. Reports by physicians. It shall be the duty of every attending physician and every consulting physician to report promptly to the commissioner, or his duly designated agent the name and, if possible, the address of, and such other data as may be required by the commissioner with respect to, any person under treatment if it appears that such person is a habitual user of any narcotic drug. Such reports shall be kept confidential and may be utilized only for statistical, epidemiological or research purposes, except that those reports which originate in the course of a criminal proceeding other than under section two hundred ten of the mental hygiene law shall be open for inspection to federal, state and municipal officers whose duty is to enforce the laws of this state or of the United States relating to narcotic drugs. No such officer having knowledge by virtue of his office of any such report shall divulge such knowledge except in connection with his duties.

General Statutes of North Carolina, 90-111.3

90-111.3. Reports by physicians. It shall be the duty of every attending or consulting physician to report to the State Board of Health, promptly, the name and, if possible, the address of any person under treatment if it appears that such person is an habitual user of any narcotic drug. Such reports shall be open for inspection only to federal and State officers whose duty it is to enforce the laws of this State or of the United States relating to narcotic drugs, or who are concerned with the commitment, care, treatment and rehabilitation of persons addicted to the use of narcotic drugs. No such officers having knowledge by virtue of his office of any such report shall divulge such knowledge except in connection with his duties.

35 Purdon's Pennsylvania Statutes Annotated 780-8

780-8. Treatment of habitual users. The narcotic provisions of this act shall not be construed to apply to research or the treatment of habitual users of narcotic drugs under the supervision of a duly licensed practitioner authorized by law to prescribe such drugs in clinics designated by the secretary, hospitals, sanatoriums, poorhouses, prisons or public institutions, except that all such clinics or institutions shall render an annual report to the State Department of Health giving therein the names, addresses, sex, ages, clinical conditions and the results of the research or the treatment of all habitual users of drugs given treatment in said clinics or institutions.

No information furnished under the provisions of this section shall be used or made available to further criminal prosecutions, investigations or harassment of any patient under the care of the reporting practitioner.

4217. Reports by physicians and hospitals. It shall be the duty of every physician and every hospital to report to the board of health, promptly, all cases wherein a person has been or is being treated for the use of, or for problems arising from the use of, regulated drugs. Said reports shall include the type of problem being treated, the class of regulated drug which was used and such further information as is required by regulation of the board of health as promulgated under section 4202 of this title, except that the regulations shall not require the listing or other identification of the names of the persons being so treated.

Code of Virginia, 54-317.2 (a)

54-317.2. Practitioners treating other practitioners for certain disorders to make reports; immunity from liability. (a) It shall be the duty of every practitioner of the healing arts in the State who treats professionally for alcoholism or drug addiction or for mental, emotional or personality disorders any person licensed under this chapter to practice any of the healing arts to report the same to the Board if he feels that the continuance in practice by such person would constitute a danger to the health and welfare of his patients or the public. Such report shall be in writing directed to the secretary of the Board, shall give the name and address of the patient treated, the condition found, and shall state the opinion of the practitioner as to whether an investigation should or should not be made by the Board or a special committee of the Board.

Revised Code of Washington Annotated, 69.32.090

69.32.090 Examination and treatment of convicted persons. Any person convicted under the provisions of RCW 69.32.080 or any person who shall be confined or imprisoned in any state, county, or city prison in the state and who may be reasonably suspected by the health officer of being a narcotic addict shall be examined for and if found to be an habitual user of said drugs, or any of them, shall be treated therefor at public expense by the health officers or their deputies who are licensed physicians. The prison authorities of any state, county, or city prison are directed to make available to the health authorities, such portion of any state, county, or city prison as may be necessary for a clinic or hospital wherein all persons who may be confined or imprisoned in any such prison, and who are habitual users of said drugs or their derivatives, may be isolated and treated at public expense until cured, or, in lieu of such isolation any such persons may, in the discretion of the board of health, be required to report for treatment to a licensed physician, or submit to treatment provided at public expense, as provided in RCW 69.32.070. Nothing herein contained shall be construed to interfere with the service of any sentence imposed by a

court as a punishment for the commission of crime: Provided, That licensed physicians treating any narcotic addict shall, upon beginning said treatment, immediately report the same to the health officer in charge in that jurisdiction, such report to be on forms prescribed by the state board of health, and such report shall give the name of the person receiving such treatment and such other information as shall be deemed necessary by the state board of health.

III.

Trafficking Patterns of Marihuana and Hashish

In 1970, federal agencies seized 84,675 kilograms of marihuana at ports and borders. The Bureau of Narcotics and Dangerous Drugs estimates that these seizures approximate 10% of the total marihuana going into the illicit traffic; therefore, by federal estimate, approximately 762,075 kilograms (846,750 minus 84,675) were consumed in the United States in 1970.

These figures do not take into consideration seizures made by state and local authorities (these are not compiled uniformly), internal seizures made by BNDD or amounts of marihuana grown and harvested in the United States. Therefore, higher estimates of consumption based on surveys of marihuana users would seem to be more acceptable as reflecting the true figure of the amount of marihuana consumed in the United States.

A study commissioned by the Bureau of Narcotics and Dangerous Drugs and conducted by Dr. William A. McGlothlin, Department of Psychology, University of California at Los Angeles was published in June, 1971. It is entitled "Marihuana: An Analysis of Use, Distribution and Control." This study estimates that 1,040,000 kilograms of crude marihuana were consumed in a given 12-month period.

The following table illustrates the ever increas-

ing consumption of marihuana in the United States:

Table I

	Federal estimate <i>Pounds</i> (kilos) ¹	Survey estimate <i>Pounds</i> (kilos) ²
1965	37,330	50,940
1966	75,182	102,593
1967	210,775	287,623
1968	461,475	629,728
1969	449,017	762,834
1970	1,676,565	2,287,840

¹ Figures obtained by following BNDD formula that port and border seizures approximate 10 percent of marihuana entering the United States.

² Figures obtained by extrapolating the 36.46 percent difference between BNDD estimates and survey estimates for 1970.

In accordance with this increase in consumption, there was an expected increase in arrests and seizures at ports and borders.¹

The figures in Tables 1 and 2 are the best available estimates. Despite their approximation, no

¹ Arrest figures are estimates by the U.S. Customs Agency from the total number of arrests made by that agency. It should be noted that an indeterminable portion of the increase in arrests and seizures must be attributed to increased law enforcement efforts, such as Operation Intercept.

Table 2

	Number arrests	Percent increase	Number seizures
1965	992	.....	685
1966	1,127	13.6	699
1967	1,518	34.69	1,081
1968	2,377	56.58	2,450
1969	3,242	36.39	2,673
1970	4,582	41.33	4,115

one could argue that there has not been a dramatic increase in demand and consumption of marihuana in the United States. This increase, however, has not changed in any substantial way the traffic pattern by which marihuana finds its way into the United States. The only real change has been an increase in the number of smuggling efforts and an increase in the amounts smuggled into the country at any one given time.

Estimates of the percentage of Mexican marihuana which constitutes the United States market vary from 75% to 90%. There is no way to determine the exact amount, but law enforcement officers feel that Jamaican and other Caribbean Island marihuana comprises 10% to 25% of the marihuana consumed in the United States.

In any event, it appears that marihuana originating in Mexico, Jamaica and other Caribbean Islands constitutes almost the entire United States commerce in that drug.

It is known that marihuana is occasionally smuggled into the United States from Central America, South America and Vietnam.² However, the amounts and traffic involved are relatively insignificant.

Marihuana Traffic From Mexico

The McGlothlin study for BNDD contains the following description of marihuana traffic from Mexico to the United States (McGlothlin, 1971: 29-39).

"Marihuana is grown in many areas of Mexico, especially in the states of Guerrero, Michoacan, Mayarit, Sonoma and Yucatan. To aid in concealment, it is planted in relatively small areas in canyons, orchards and corn fields. Two crops per year are grown, and harvesting is normally in October and April, although the harvest may be spread over a three-month period in the various

² U.S. Customs reports that in the period from May to November, 1971, 287 parcels were seized from the Vietnam U.S. Army Post Office. The average amount of marihuana in these parcels was approximately one ounce. These attempts were obviously non-commercial efforts and were intended for the senders' or recipients' own use.

states. Three crops may be obtained in Yucatan. It may be grown and harvested independently by the farmer or under a sharing arrangement with another party who furnishes seeds and fertilizer and sometimes also owns the land. It may be sold prior to harvesting, in bulk after cutting and drying, or, most often, in pressed bricks. Purchases at this level are often of the order of several tons. The current price in large quantities is \$6-10 per kilogram brick. Some individuals (connections) may control as much as 100 tons. After the marihuana is brought out of the growing area, it sells for \$20-\$25 per brick in lots of 500 kg. or more. It may be sold at this point to the person who moves it directly to the U.S., but usually it is sold to a Mexican dealer who transfers it (generally by truck) to a point near the U.S. border. The dealer then retails (5-20 kg.) or wholesales to American buyers on the Mexican side of the border, or smuggles it across for delivery on the U.S. side. Storage of large quantities may be either near the growing fields or at locations near the border. Numerous dealers who operate near the border are capable of delivering a ton or more at any time. The price on the Mexican side of the border is \$35-40 per short kg.³ in quantities of 100 kg. or more.

"Based on an annual export of 1,350,000 short kg., the economics of the marihuana market on the Mexican side of the border are:

Level	Price per short kilogram	Annual expendi- ture (thou- sands)	Gross profit (thou- sands)
Farmer (1,000 kg. up) . .	\$8	\$10,720	\$10,720
Connection (500 kg. up).....	22	29,480	18,760
Dealer near border (100 kg. up).....	35	46,900	17,420

Importation

"On the Mexican side of the border the enormous bulk of marihuana does not impose severe restrictions. Individuals or groups may control large or small amounts as in the case of other illicit commodities. At the point of importation and beyond, the bulk involved imposes a severe limitation and is the major factor shaping the distribution system on the U.S. side. When one considers (1) approximately 3 tons of marihuana per day must be smuggled from Mexico to the

³ McGlothlin found that the average weight of a brick of Mexican marihuana was 780 gms.

U.S., typically in lots of no more than 50-300 kg.; and (2) the bulk of marihuana makes it infeasible to store in quantity on the U.S. side; the prohibitive complexity of controlling more than a relatively small operation becomes apparent. By comparison, the annual import of heroin is probably less than one day's smuggling activity for marihuana by weight, and it may be imported and stored in the U.S. well in advance of its distribution.

"Amounts of marihuana smuggled from Mexico vary from 1 or 2 kilograms brought across the border by an individual to a recent attempt to import 5 tons by boat. The vast majority of smuggling attempts involve amounts on the low end of the scale. In 1969, the mean weight of the 2,673 marihuana seizures made by Customs was less than 10 kg. In a 1971 sample of 71 major seizures (sufficiently large to be reported to the Los Angeles regional Customs office), the distribution was as follows:

Kilograms	
50 -----	6
50 to 99 -----	27
100 to 199 -----	21
200 to 499 -----	11
500 to 999 -----	5
1,000 -----	1

Four of the 6 seizures above 500 kg. were from aircraft. All but two of the remainder were seized from vehicles crossing the border. Seven of the 71 seizures were in bulk (loose) form; the remainder were in bricks. Occasionally a large truckload is brought across, but the largest proportion is smuggled by cars and campers carrying 50-250 kg. concealed in panels, false bottoms, etc. The relative proportions of marihuana smuggled by vehicle, aircraft and boat are not known; but about 18% of the amount seized is intercepted in vehicles. However, some authorities are of the opinion that aircraft are carrying an increasing portion of the traffic—considerably more than is indicated by the percentage of seizures.

"When smuggling sizable quantities by vehicle, the Mexican dealer typically hires drivers (called "mules") to cross the border in old cars and deliver in San Diego, or more often, in Los Angeles. In other instances, the American dealer may pick up a load in Mexico, near the border, and drive back to the U.S. himself. In larger operations, drivers are hired on the American side to make the pickups in Mexico. In general, large dealers frequently utilize hired intermediaries to reduce the risk in crossing the border and making pickups. When smuggling in by aircraft or boat, the contraband is most usually picked up by Americans on the Mexican side of the border.

Distribution

"On entry into the U.S., marihuana sells for around \$75-90 per short kilogram in lots of 100 or more bricks at points near the Mexican border. The distribution routes from this point to the ultimate consumer are highly varied, but most transactions in the larger quantities (100 kg. and up) have one feature in common—rapid dispersal to smaller dealers or transshipment to other areas of the country. Virtually all warehousing of large quantities of marihuana is done on the Mexican side of the border. Normally, the buyers for a lot of 100 kg. or more are known prior to importation, and dispersal, or transshipment takes place immediately after delivery. In some instances, a few local dealers may pool their funds to make a 100 kg. buy. Lots of 100 kg. involve some 7 to 9 thousand dollars. There is some evidence of "fronting" money for buys at 15% per transaction by individuals who have no actual contact with the shipment.

"The size of the transaction at the next level varies from only one or two sales of 50-100 kg. for a profit of \$20-25 per kilogram to sale of single bricks or even smaller quantities in the case of a local group pooling funds for a large purchase. Normally, although an individual buying in 100 kg. lots would not sell in quantities of less than 5 or 10 kg., he may frequently be willing to sell much larger quantities for lower profits, particularly to another known wholesaler which involves little risk. In general, the price is dependent on size of transaction, extent of risk, and distance from the border. The quality of the marihuana and the actual weight of the "kilogram" bricks are also factors, especially in smaller transactions. Finally, the price will vary with availability, and there is some seasonal fluctuation corresponding to the time of harvest in Mexico. The current price per single short kilogram is around \$150-200 in California and other border states, and around \$225-275 in most other areas of the country.

"Assuming an annual consumption of 1,330,000 short kilograms of marihuana (including Mexican, domestic and other origin), the annual expenditures in the U.S. as a function of lot size are estimated as follows:

Level	Price per short kilogram	Annual expenditure (thousands)	Gross profit (thousands)
100 kg. and up...	\$85	\$113,000	\$72,000
10 to 15 kg.	150	200,000	87,000
1 kg.	250	332,000	132,000

* Assumes marihuana from all sources (including domestic) sells at the Mexican price of \$35 per short kilogram and that 115,000 kg. (or 148,000 short kilograms) are lost in seizures for a total loss of \$5,200,000.

"Hashish sells for \$600-1,000 per pound. There does not appear to be much regional variation in price, although it generally sells for less in areas where there is a relatively large market or it is in competition with low priced marihuana, e.g., San Francisco and Los Angeles. No information was available on prices for multi-pound lots. Assuming the annual consumption to be around 11,000 kg., or 24,000 lbs., and a price structure similar to marihuana, the annual expenditures for hashish are estimated as follows:

Level	Price per pound	Annual expenditures (thousands)	Gross profit (thousands)
10 lb. and up.....	\$500	\$12,000	\$11,600
1 lb.....	800	19,200	7,200

"The standard retail unit for marihuana is an ounce or "lid" of uncleaned material. No statistics were collected on the actual weight of marihuana sold as ounces; however, BNDD price data and information obtained from other sources reveal that in the majority of cases the "ounce" is short by about the same proportion as the brick, i.e., it averages around 22 instead of the full 28.3 gm. Marihuana is also sold in pound, half-pound and quarter-pound quantities. At retail and near-retail levels the material may be weighed and sold according to actual weights or estimated by dividing the brick into a given number of smaller parcels. The practice of dealing in short weights results in some dealers explicitly offering a "full" ounce or pound at proportionately higher prices. The current price per short ounce in California and the Southwest is \$10-15. In most other areas, a short ounce sells for \$20-25, and prices in Chicago and Ohio are quoted as high as \$35-40. Marihuana may also be retailed in "nickel" bags, containing 3-5 gm. and selling for \$5. Occasionally, the smaller quantities are sold in loose cleaned (manicured) form, or in cigarettes. The addition of adulterants such as oregano is not uncommon in this form.

"Hashish retails for \$5-10 per gram, but it is often sold to the ultimate consumer in ounce quantities at prices ranging from \$70-125.

"Several authors have described the distribution of marihuana at the retail level. The majority of persons who use several times per week or more technically have also sold marihuana, although it may be no more than sharing a purchase with friends at no profit. One survey reported 85% of persons using 3 or more times per week fall in this category. Others casually sell to a few close

acquaintances to earn their own supply and a small amount of money. Others retail marihuana as a full-time occupation. Still others move further up the ladder, buying in quantities of 5-10 kg., selling some as single bricks, and retailing the remainder in ounces or fractions of a pound. In general, retail dealers in the lower socio-economic minority groups are more likely to view their selling activities as a full-time occupation, while many middle-class youth sell on a more casual and part-time basis. The former operate for low profits and often sell in less than ounce quantities in a highly competitive market. With the economic squeeze, however, many white youth are adopting small-time dealing as a means of earning a living; and this market is also becoming increasingly competitive.

"In order to estimate the retail expenditures for marihuana it is necessary to assume the purchase size by the ultimate consumer. As would be expected, heavier users are more likely to buy larger amounts at a time. The buying of one-quarter to one pound, or even a kilogram, for sharing among a group of users is not uncommon. In one study of fairly heavy users, 17% stated they purchased a kilogram at a time about one-half of the time. The size of purchase is also influenced by the economic status of the buyer and the price of marihuana; e.g., purchases of less than an ounce are relatively uncommon in California where the ounce price is \$10-15; but in the East a cost of \$25 an ounce reportedly results in more frequent purchases of smaller quantities, especially among lower socio-economic groups. The retail expenditures for marihuana and hashish are estimated in Table 3, taking into account the variability in purchase sizes as a function of frequency of use. The number of users and percentage of total consumption by frequency of use is taken from Table 7. The National average price of marihuana is assumed to be \$250 per short kilogram and \$20 per short ounce, or \$700 for a short kilogram bought in short ounce units. The more frequent users are assumed to obtain their supplies at less than \$20 per short ounce either buying larger quantities, sharing in group purchases, or by obtaining lower prices through familiarity with dealers. The average price paid (expressed in dollars/short kilogram) for daily users is estimated to be around \$450—a price intermediate between the short kilogram (\$250) and the cost bought in short ounce units (\$700). In the 3-6x/wk. frequency group, 50% are estimated to buy in the same manner as daily users and 50% in short ounce units at the full price, for an average \$575 per short kilogram. For persons using 2 times per week or less, one-half are assumed to buy at \$20/short ounce and one-half

in smaller units equivalent to \$30/short ounce, for an average of \$875 per short kilogram.

"Similar assumptions were made for hashish purchases. Retail prices for hashish were assumed to be \$8/gm. and \$90/oz. Three-fourths of the

daily users and one-half of the 3-6x/wk. group were estimated to obtain hashish at the ounce price and the remainder at the gram price. All of the 2x/wk. or less group were assumed to buy at the gram price.

Table 3.—ESTIMATE OF RETAIL EXPENDITURES FOR MARIHUANA AND HASHISH

	Frequency of use			
	Daily	3 to 6 times per week	≤ 2 times per week	Total
Number of users.....	470,000	1,582,000	5,851,000	7,903,000
Proportion of total consumption (percent).....	32	44	24	100
Marihuana (short kg.).....	425,000	585,000	320,000	1,330,000
Hashish (lb.).....	7,680	10,560	5,760	24,000
Retail price:				
Marihuana (dollars per short kg.).....	450	575	875	607
Hashish (dollars per lb.).....	2,000	2,500	3,600	2,600
Annual expenditures (dollars):				
Marihuana × 10 ³	191,000	336,000	280,000	807,000
Hashish × 10 ³	15,360	26,400	20,740	62,500
Total × 10 ³	206,360	362,400	300,740	869,500
Total expenditure per user:				
Annual (dollars).....	439	229	51	110
Weekly (dollars).....	8	4	1	2

"It is of interest to note in Table 3 that the estimated annual expenditure for hashish is about 7% of the total, with the hashish retail price being about 5 times that for cleaned marihuana on a per weight basis. This is consistent with the assumption of a 5:1 ratio in THC content.⁵ If we assume marihuana (cleaned) and hashish to average 1 and 5% THC respectively, the mg. THC/dollar cost may be expressed as follows:

Unit	Weight in grams	Price	Milligrams TNC per dollar
Marihuana:			
1 short kilogram.....	546.0	\$250	21.8
1 short ounce.....	15.4	20	7.7
Hashish			
1 pound.....	453.0	800	28.3
1 ounce.....	28.3	90	15.7
1 gram.....	1.0	8	6.2

¹ Cleaned marihuana.

In the Southwest, where marihuana sells for \$10-15 per short ounce, hashish is considered expensive at \$5-10 per gram. In most other parts of the country the average amount of THC con-

tained in marihuana and hashish appears to be about equal for comparable-size purchases (providing the 1:5 ratio assumption is valid). In individual samples, the THC content may be very different because of the wide variability in marihuana and hashish potency.

"Previously in this section the annual expenditures for marihuana at the short kilogram level was estimated at 332 million, and the expenditures for hashish at the pound level, 19.2 million. Subtracting these values from the annual retail expenditures in Table 10 leaves a gross profit at the retail level of 518 million. Several authors have concluded that marihuana dealing at the retail level is a low profit operation—a dealer serving some 25 customers and making \$200-300 per month. At this rate, the gross retail profit estimated here would be sufficient to employ some 170,000 persons in retail selling."⁶

Marihuana Traffic From Jamaica

The second source of substantial amounts of marihuana for the United States is Jamaica and other Caribbean Islands. It is the theory of some individuals in law enforcement and of some

⁵ Hashish, like marihuana, is highly variable in THC content, ranging from about 1-15%, and is also susceptible to deterioration with age.

⁶ Since marihuana retailers often also sell other drugs, the number involved may be substantially larger than 170,000.

Jamaican authorities that the advent of Operation Intercept⁷ caused many large volume dealers to establish contacts in the Caribbean, mainly in Jamaica, to insure a steady flow and source of marihuana. Jamaican authorities report increased activity in marihuana dealing by American citizens shortly after Operation Intercept was instituted.

Whether this activity was coincidental or caused by Operation Intercept is unimportant. What does matter is that greater and greater numbers of United States citizens were receiving an entree to the singular quality of Jamaican marihuana.

The Bureau of Narcotics and Dangerous Drugs has determined that the average amount of Δ^9 T.H.C. in Mexican marihuana is 1.0%. A recent study (Beaubrun, 1971) has found that the content of this active ingredient in Jamaican marihuana is about 1.5% to 5.5%.

As this discovery became widely known, the demand for Jamaican marihuana increased and currently continues. As a result, more and more marihuana is being smuggled into the United States from Jamaica and other Caribbean Islands. In response to the increase in marihuana smuggling from Jamaica and other Caribbean Islands, the BNDD sent two of its top officials to Jamaica in August 1971, to obtain a first-hand view of the situation.

Cultivation

They reported that Jamaica is a natural hot-house for marihuana growth and that it grows in abundance all over the island in extremely inaccessible mountainous areas. Small to large growing areas are cultivated by individuals or small groups of natives who jealously guard their crops. The natives are sufficiently sophisticated to have set up warning systems. With the advantage of mountain look-out posts, they can easily spot police climbing up the mountains and escape long before the police arrive at the growing areas. As a result, very few growers are apprehended.

An additional problem is that marihuana is a major cash crop for the poor hill and mountain farmers. Further, it is estimated that one-half the adult male population in Jamaica smokes marihuana. Under these conditions, it is obvious that the populace is not sympathetic to police attempts

to eradicate marihuana and stop marihuana trafficking.

In the recent past, the police attempted to eradicate marihuana through the use of a herbicide sprayed from a plane. The effort resulted in damage to other crops and in threatened law suits which quickly halted this activity.

The Jamaican police estimate they destroy approximately 100 tons of growing marihuana each year and consider this an insignificant amount.

Very few growers cultivate sufficient amounts of marihuana to supply buyers with multi-hundred pound lots. The buyers who are generally American, caucasian, hippie-types from South Florida, may make contact with a middleman or a major grower who will assemble a lot through contributions from a number of growers and transfer it to the buyers; or the buyer may make direct contact with several growers and compile his own lot. Currently, the most important areas for making connections to purchase marihuana and for loading it are Kingston and Montego Bay.

Importation

Once a load is assembled there are numerous ways to get it off the island and into the United States. A private or chartered boat can pull into any one of hundreds of natural dock landings or private docks for loading or have the load brought out to the boat by canoe. As much as two tons have been loaded by transfer from canoes in less than 30 minutes.

The favored method of transportation is by air. There are 42 airstrips in Jamaica of which only four are guarded and patrolled. Additionally, there are many isolated beaches and roads upon which planes can land. Further, Jamaica does not have air defense radar or an air patrol. Thus, it is a relatively simple matter to get in and out by air.

After a plane is loaded, there are several ways to return to the United States safely. Every plane must file a flight plan and identify itself before entering the national airspace of the United States. It must then land at the nearest airport to clear Customs.

One method employed is to drop the load in the Everglades, land to clear Customs and then pick up the load by truck. Another method is to drop the load on one of the many small, deserted Bahama Islands and make a pick-up later by boat. A further method, and certainly the most sophisticated, requires two aircraft.

On the return flight to Florida the aircraft carrying the marihuana meets with a second plane on entering the periphery of the U.S. radar cover-

⁷ Operation Intercept was an intensive, concerted, federal effort to interdict smuggling of marihuana along the entire Mexican-United States border. It lasted from September 21, 1969 to October 9, 1969. It was a successful endeavor and was immediately followed by the less intensive Operation Cooperation which lasted until November 7, 1969.

age. The planes then align themselves piggyback fashion entering U.S. airspace and appear as one blip on the radar screen. The empty plane identifies itself and then breaks away from the other aircraft. Once outside the peripheral radar area, it lands according to its flight plan where it is searched and cleared by U.S. Customs. The plane carrying the marihuana is then free to land at an uncontrolled airstrip.

An interesting aspect of Jamaican and Mexican traffic that is common to all drug trafficking but simpler with marihuana because of the ease by which it may be smuggled, is parleying your money.

An individual can invest \$1,000 in an operation in which a group has pooled its money. For his share he may get up to 100 pounds of marihuana which he can sell for close to \$15,000. With this sum he can afford to charter his own boat or aircraft and bring in a larger amount of marihuana. Through a series of these progressions, an individual could make, and reportedly several have made, substantial sums in the marihuana trade.

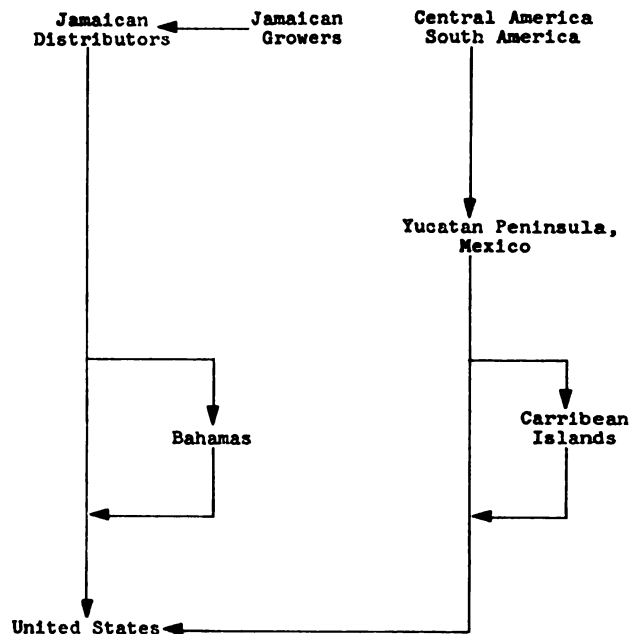
One of the offshoots of increased trafficking with Americans, according to Jamaican officials, has been the introduction of other drugs to Jamaica. Purportedly, Americans are exchanging quantities of cocaine and LSD for marihuana, and these drugs are finding their way into the internal Jamaican traffic. This has been a recent cause of consternation to Jamaican officials.

Despite the better quality of Jamaican marihuana, it has not as yet gained nationwide distribution. To date, it has made its way up the East Coast and as far west as Chicago. This is evidenced by 16 seizures totaling 21,300 pounds of Jamaican marihuana which were made in Florida, Georgia, South Carolina, Chicago and New York by the Bureau of Narcotics and Dangerous Drugs in 1970-71, the largest seizure being 4,000 pounds in a New York City warehouse on December 1, 1971.

Further spread has undoubtedly been restricted by the contiguity of Mexico and the abundance of highly acceptable marihuana from that country. Nevertheless, Jamaican marihuana has made strong and seemingly permanent inroads into the American market.

The following diagram provides a general overview of traffic other than directly from Mexico.

Although great activity has not been observed, there have been instances of marihuana from Central America and South America finding its way through Mexico to the Caribbean Islands and into the United States. To date there has not been sufficient traffic to cause concern that these areas



are major sources of marihuana. However, they bear watching to see if set patterns or trends develop.

The Growing Hashish Traffic

Hashish traffic has greatly increased in the last several years. Although hashish use has not reached the proportions of marihuana use, the drug is steadily growing in popularity. The table below illustrates this increase through seizures made by the U.S. Customs.

Fiscal year	Number of seizures	Number of pounds	Percent increase in poundage
1968	N/A	191	.....
1969	186	623	226
1970	646	3,121	400
1971	1,760	6,819	118

The following report concerning hashish trafficking patterns was supplied by the Bureau of Narcotics and Dangerous Drugs.

"Seizures of hashish reported to the United Nations by Lebanon and neighboring countries suggest that Lebanon is probably the world's leading producer of this drug. Although as much as 90% of the hashish produced in Lebanon appears destined for the illicit traffic in Egypt, there is a rapidly increasing traffic from Lebanon to the United States and Western Europe. A significant amount enters the United States by way of Israel.

"During the past year there has been an increase in hashish smuggling from Afghanistan. Preliminary findings are that much of this material is actually grown and produced in West Pakistan. India has been the source country of hashish involved in several recent seizures. Indian officials report that much of the drug found in India is grown and produced in Nepal. Morocco and Tunisia appear to be source countries for hashish being smuggled into Spain frequently for further distribution to the United States and Europe. It is not known how much of the drug from these sources actually originates in Lebanon.

"Hashish is grown and produced in Lebanon, Pakistan, North Africa, Afghanistan, Nepal, and India, with some produced in Turkey.

"There are persistent reports that hashish is being produced in South America, but apparently not in significant amounts.

"The increasing use of hashish can possibly be explained by the emergence of a new class of drug user, predominantly from middle and upper class societies. As an example of increasing use of hashish, the statistics of the Division of Narcotic Drugs of the United Nations showed that between January and August 1968, the member nations reported seizing 6,766 kilograms (kg) of cannabis which included much hashish. As a comparison, between January and August 1969, 16,987 kilograms of cannabis were seized. The same comparison is valid for the United States.

"In Europe alone there were 25 Americans arrested between December 1969 and April 1970, in possession of 864.6 kg of cannabis. The bulk of these United States citizens arrested abroad are between 20 and 30 years of age and not the criminal type as we know it in the heroin and cocaine traffic. Most of these Americans are of the so-called "hippie" class and have been arrested with a small amount of hashish intended for their personal use and that of their immediate associates. However, increasing numbers are found with significant amounts of hashish indicating that they are smuggling for profit.

"According to the latest figures submitted to the United Nations, the price of hashish per kilogram in Lebanon has risen to \$49 for class-one hashish and \$20 for class two. The same hashish when smuggled into the United States will bring from \$2,000 to \$2,500 per kilogram. Some professional marihuana smugglers have switched to hashish due to the reduction in bulk and increase in price.

"Much of the hashish smuggling is not directed at the United States. Several violators have indicated that they were smuggling hashish to Western Europe, especially Germany, France, and Italy, for resale to the nationals of these countries.

Lebanon

"Although Lebanese law prohibits the growing, selling, possession, or transportation of hashish, most evaluations indicate that Lebanon is the leading grower and producer of hashish in world traffic. In 1969, Lebanon reported to the United Nations that over 10,000 kg of hashish were seized in that country. In the first four months of 1970, Lebanon seized over 3,200 kg of hashish.

"A large part of the hashish grown and produced in Lebanon is destined for countries other than the United States. It is estimated by various officials that 90% is smuggled through Syria and Jordan to Egypt for local consumption.

"Several Americans have been arrested attempting to smuggle significant amounts of hashish (from 9 kg to 83 kg) out of Lebanon by commercial airlines. Some of those arrested were attempting to fly to Canada where they could then enter the United States by various routes. Canada also provides a ready market for the sale of hashish.

"As of 31 March 1970, Lebanon had 17 United States citizens in detention for hashish violations. Lebanese law sets a penalty for use at one to three years, and trafficking at three to 15 years. Most of those arrested indicated to State Department officials that they obtained the hashish in Lebanon.

Israel

"Several Americans have been arrested attempting plants for hashish production, but it is a significant transshipment country. Israel seized close to 3½ tons of hashish in 1969. A large amount of this was seized while in transit to Egypt. The majority of Americans arrested in Israel are charged for drug violations, chiefly involving hashish.

"The present situation in the Middle East has caused massive diversion of law enforcement personnel to Israel's security forces. Similar conditions in neighboring countries are conducive for the conduct of highly organized smuggling from this area to the United States and Europe.

Afghanistan

"Afghanistan has recently become a significant source for hashish smugglers. Several individuals have been arrested by Greek authorities on the Greek-Turkish border traveling predominantly in Volkswagen buses with as much as 70 kg of hashish secreted inside the paneling of the vehicles. Americans detained in Greece advised State Department officials that they obtained the hashish in Afghanistan.

"One violator stated that he saw and talked with at least 30 youthful smugglers in Afghanistan who were all purchasing multikilogram quantities of hashish. He said that Americans were waiting in line for Afghan peddlers to load their vehicles.

"Most of the hashish in Afghanistan is reported to have been grown and produced in Pakistan. Afghanistan cannot stop smuggling across the Afghanistan-Pakistan border because this area is under the control of tribesmen who are deeply involved in the smuggling.

India and Nepal

"India takes a very permissive attitude toward the use of hashish and in fact the drug can be legally purchased through government-controlled outlets. Hashish grown and produced in India is of an indifferent quality and much of the hashish sold there is brought into India from Nepal and Pakistan. Indian officials state that it is very difficult to control smuggling from these countries due to the terrain and the extended borders.

"The Indian authorities are examining outgoing mail for hashish, and between January 1970 and 30 April 1970, 135 parcels containing a total of 86,643 kg of hashish were seized at New Delhi alone; 91 of these parcels were addressed to the United States. In 1968, 31 kg of hashish were seized in such a manner and this figure rose to 98 kg in 1969.

"According to reports to the United Nations, the government of Nepal prohibited the unauthorized cultivation of cannabis in 1960, but it is unknown what enforcement steps have been taken.

Pakistan

"Questioning of traffickers suggests that a large amount of the hashish obtained in Afghanistan and India is actually grown and produced in Pakistan.

"Several American citizens have been arrested at the Karachi Airport while attempting to smuggle significant amounts of hashish out of Pakistan. One seizure at Karachi amounted to 169 pounds of hashish. Pakistan reported seizing 93,245 kg of

hashish to the United Nations during the first three months of 1970.

"The U.S. Customs Bureau has made several seizures of hashish up to 41 kg from ships listing Pakistan as the source country.

Morocco

"Morocco and other North African countries have traditionally been a source of hashish. A significant number of persons have been arrested in Spanish seaports returning from Morocco with hashish for personal use.

"The French authorities recently made a 108-kg seizure of Moroccan hashish secreted in an automobile waiting to be shipped to the Philippines where it was to be shipped to the United States. An American was arrested by Spanish authorities attempting to smuggle hashish from Tunisia through Spain to Germany where he intended to sell the drug.

Turkey

"In 1968, Turkey reported seizing 552 kg of hashish to the United Nations. Recently Turkish officials reported several seizures of hashish including one 23-kg seizure last June.

"The cultivation of the cannabis plant is prohibited by Turkey and, if found, the crops are destroyed and the persons growing cannabis are prosecuted."

In brief, the above listed countries are sources of hashish smuggled into the United States. Much of it is transported directly to this country from the country of origin. However, large amounts are transshipped through Israel and Canada and then smuggled into the United States from those countries.

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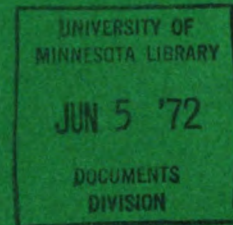
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appendix



marihuana: a signal of misunderstanding



The Technical Papers
of the First Report of
the National Commission
on Marihuana and
Drug Abuse

VOLUME II



Public Law 91-513
91st Congress, H. R. 18583
October 27, 1970

An Act

To amend the Public Health Service Act and other laws to provide increased research into, and prevention of, drug abuse and drug dependence; to provide for treatment and rehabilitation of drug abusers and drug dependent persons; and to strengthen existing law enforcement authority in the field of drug abuse.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Comprehensive Drug Abuse Prevention and Control Act of 1970".

PART F—ADVISORY COMMISSION

ESTABLISHMENT OF COMMISSION ON MARIHUANA AND DRUG ABUSE

SEC. 601. (a) There is established a commission to be known as the Commission on Marihuana and Drug Abuse (hereafter in this section referred to as the "Commission"). The Commission shall be composed of—

- (1) two Members of the Senate appointed by the President of the Senate;
- (2) two Members of the House of Representatives appointed by the Speaker of the House of Representatives; and
- (3) nine members appointed by the President of the United States.

At no time shall more than one of the members appointed under paragraph (1), or more than one of the members appointed under paragraph (2), or more than five of the members appointed under paragraph (3) be members of the same political party.

(b)(1) The President shall designate one of the members of the Commission as Chairman, and one as Vice Chairman. Seven members of the Commission shall constitute a quorum, but a lesser number may conduct hearings.

(2) Members of the Commission who are Members of Congress or full-time officers or employees of the United States shall serve without additional compensation but shall be reimbursed for travel, subsistence, and other necessary expenses incurred in the performance of the duties vested in the Commission. Members of the Commission from private life shall receive \$100 per diem while engaged in the actual performance of the duties vested in the Commission, plus reimbursement for travel, subsistence, and other necessary expenses incurred in the performance of such duties.

(3) The Commission shall meet at the call of the Chairman or at the call of a majority of the members thereof.

(c)(1) The Commission shall have the power to appoint and fix the compensation of such personnel as it deems advisable, without regard to the provisions of title 5, United States Code, governing appointments in the competitive service, and the provisions of chapter 51 and subchapter III of chapter 53 of such title, relating to classification and General Schedule pay rates.

(2) The Commission may procure, in accordance with the provisions of section 3109 of title 5, United States Code, the temporary or intermittent services of experts or consultants. Persons so employed shall receive compensation at a rate to be fixed by the Commission, but not in excess of \$75 per diem, including traveltime. While away from his home or regular place of business in the performance of services for the Commission, any such person may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by section 5705(b) of title 5, United States Code, for persons in the Government service employed intermittently.

(3) The Commission may secure directly from any department or agency of the United States information necessary to enable it to carry out its duties under this section. Upon request of the Chairman of the Commission, such department or agency shall furnish such information to the Commission.

(d)(1) The Commission shall conduct a study of marihuana including, but not limited to, the following areas:

- (A) the extent of use of marihuana in the United States to include its various sources, the number of users, number of arrests, number of convictions, amount of marihuana seized, type of user, nature of use;
- (B) an evaluation of the efficacy of existing marihuana laws;
- (C) a study of the pharmacology of marihuana and its immediate and long-term effects, both physiological and psychological;
- (D) the relationship of marihuana use to aggressive behavior and crime;
- (E) the relationship between marihuana and the use of other drugs; and
- (F) the international control of marihuana.

(2) Within one year after the date on which funds first become available to carry out this section, the Commission shall submit to the President and the Congress a comprehensive report on its study and investigation under this subsection which shall include its recommendations and such proposals for legislation and administrative action as may be necessary to carry out its recommendations.

(e) The Commission shall conduct a comprehensive study and investigation of the causes of drug abuse and their relative significance. The Commission shall submit to the President and the Congress such interim reports as it deems advisable and shall within two years after the date on which funds first become available to carry out this section submit to the President and the Congress a final report which shall contain a detailed statement of its findings and conclusions and also such recommendations for legislation and administrative actions as it deems appropriate. The Commission shall cease to exist sixty days after the final report is submitted under this subsection.

(f) Total expenditures of the Commission shall not exceed \$1,000,000.



appendix

**marihuana:
a signal of
misunderstanding**

The Technical Papers
of the First Report of
the National Commission
on Marihuana and
Drug Abuse

March 1972

VOLUME II

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part four
response of
the criminal
justice system
to marihuana
use

The criminal laws of the Federal Government and of every state currently forbid all marihuana-related activity, including the possession of marihuana for personal use.

One of the purposes for which Congress established the Commission was to evaluate the efficacy of the criminal justice system in dealing with marihuana use, a behavior engaged in at one time or another by at least 24 million Americans.

The Commission sought to determine how the law enforcement community at the federal and state levels has been dealing with the increase in marihuana use and with the consequent influx of arrests.

An operating assumption of the Commission's studies was that "full" or "total" enforcement of the marihuana laws was impossible. Especially for such a widespread behavior generally occurring in private, the law enforcement community cannot detect all offenders. At each level—investigation, arrest, prosecution, judicial disposition and sentencing—choices must be made. Participants in the criminal justice system must be "selective," in the sense that they must utilize their discretion in determining the intensity with which the law will be enforced and the severity with which it will be

applied. In short, the legal status of marihuana use is determined by more than the penalty provisions in the statute books. Within certain limits, it is determined instead by what the participants in the criminal justice system *think* and what they actually *do*.

This part of the Appendix will explore the various dimensions of behavior and opinion within the criminal justice system. Chapter I examines enforcement behavior at the state level, first by presenting the available data trends in arrests, and then by analyzing in detail the marihuana enforcement picture in six major metropolitan areas of the United States.

Chapter II examines enforcement behavior at the federal level, first by reporting the overall statistics on arrests and seizures, and then by analyzing the marihuana arrests made in calendar year 1970 by the Bureau of Narcotics and Dangerous Drugs, United States Customs, and the Immigration and Naturalization Service, the three federal agencies responsible for enforcement of the federal drug laws. Finally, Chapter III considers opinions of participants in the criminal justice system at the state level.

I. Enforcement Behavior at the State Level

Obtaining figures on the arrests, convictions and seizures of marihuana by the states is more difficult than securing information at the federal level.* The only attempt to compile this data on a national scale is that made by the Federal Bureau of Investigation for purposes of its Uniform Crime Reports.† However, the FBI information concerns arrests only, and not all of the states report these figures. As stated in the 1970 Uniform Report:

Arrest statistics are collected annually from contributing law enforcement agencies and the figures used in the tables this year were submitted by agencies representing 75 percent of the United States' population. In using these arrest figures it is important to remember that the same person may be arrested several times during 1 year for the same type or for different offenses.

The number of state agencies reporting and the population represented by the reports varies to

*The problems are manifold. For example: (1) the laws of several states do not distinguish marihuana offenses from other narcotic offenses; therefore, separate statistics on marihuana offenses do not exist. (2) Some states do not require their law enforcement agencies to report crime statistics. (InTech, p. 70)

†Even under the FBI system a large number of marihuana cases are not counted. The uniform reporting system is a hierarchical system. Only the most serious crime charged is scored and reported; all lesser crimes are buried. (InTech, pp. 80, 81)

some extent from year to year; therefore, each yearly report is based on a different universe. For this reason, precise comparison of data is impossible and the statistics are probably understated.

TABLE A.—State marihuana arrests ¹

	Total drug arrests	Percent marihuana arrests	Total marihuana arrests	Percent change
1965.....	60,500	31.1	18,815	.....
1966.....	75,900	41.0	31,119	65.39
1967.....	121,500	50.9	61,843	98.73
1968.....	198,900	48.2	95,870	55.02
1969.....	288,600	41.2	118,903	24.02
1970.....	415,600	45.4	188,682	58.68

¹ Total drug arrest figures are based upon figures submitted by law enforcement agencies which vary in number from year to year. Further, the percentage of population represented by these agencies also varies from year to year. Therefore, it is not possible to achieve precise data, but trends can be indicated.

The most significant finding from the arrest data available for the states is the rapid increase in marihuana arrests between 1965 and 1970. During these years the number of arrestees increased 1,000%. In addition, Table A above shows that

marihuana arrests account for 45.4% of all drug arrests made by state authorities.

TABLE B.

	Percent of narcotic arrests of total arrests ¹	Percent of marihuana arrests of total arrests
1965.....	0.92	0.28
1966.....	1.22	.50
1967.....	1.86	.94
1968.....	2.93	1.41
1969.....	4.02	1.66
1970.....	5.32	2.41

¹ Does not include marihuana arrests.

Marihuana arrests have increased not only in relation to all drug arrests but also in relation to *all* arrests at the state and local level. The figures in Table B were taken from the FBI's Uniform Crime Reports table designated "Arrests, Number and Rate, by Population Groups."

According to these figures, in the six-year period pictured, the portion of the crime pool at the state level made up by narcotic arrests has increased 578% and that of marihuana arrests has increased 861%.

In rural areas the increase of marihuana offenses in relation to other drug offenses is considerable. (See Table C)

TABLE C.—Percent of marihuana arrests of total drug arrests in city, suburban, and rural areas

	Percent mari- huana arrests of total drug arrests	City ¹	Subur- ban ¹	Rural ¹
1965.....	31.1	30.9	35.4	38.4
1966.....	41.0	40.4	52.0	55.1
1967.....	50.9	49.4	66.1	61.4
1968.....	48.2	46.1	60.1	73.2
1969.....	41.2	39.2	51.5	69.2
1970.....	45.4	42.7	60.7	75.8

¹ These figures represent the percentage of marihuana arrests for the category of area reporting, e.g., for all cities reporting in 1965, marihuana arrests constituted 30.9 percent of total drug arrests.

In view of the deficiencies of existing data collection on enforcement practice at the state level, the Commission decided to conduct its own survey of selected state jurisdictions. A paper by Professors Weldon T. Johnson of the University of Wisconsin (Department of Sociology) and Robert L. Bogomolny of Southern Methodist University (School of Law) analyzes the data collected in this study.

A Study of Enforcement in Selected Jurisdictions†

Scientific information concerning the pharmacological, psychological and social effects of marihuana only partly answers questions about controlling marihuana use. Attention must also be directed toward the effects of formal procedures designed to control use and distribution of the drug. A sensitivity to the social consequences of existing methods and procedures of marihuana control is reflected in current discussions of the "costs" and "benefits" of marihuana laws and their supporting enforcement apparatus. Common references to "crimes without victims" or the "legislation of morality" or "the crisis of overcriminalization" indicate that many of the questions associated with the marihuana issue are no longer strictly medical or clinical. The marihuana "issue" is increasingly recognized as a straightforward question of social policy: What laws enforced by what sanctions and involving what consequences will enable society to establish and maintain desired conduct in regard to the use and distribution of cannabis?

Possession of cannabis has been subject to criminal sanctions in the United States for up to 50 years. During this period two developments of special significance have occurred. First, the incidence of marihuana use has increased substantially.¹ Second, the incidence of marihuana use has moved across demographic sectors such as age, gender, region, education and occupation.² The first development has generated considerable critical comment about the deterrent value of statutes which prohibit use of cannabis. The second has led to more recent concern about the justice of the laws and the operation of the criminal justice system. Whether marihuana statutes can be enforced by the present law enforcement system in a manner

† The data collected in this study were analyzed for the Commission by Professors Weldon T. Johnson of the University of Wisconsin (Department of Sociology) and Robert L. Bogomolny of the Southern Methodist University School of Law, in a paper entitled, "The Crime of Cannabis: From Detection to Disposition." That paper is published in its entirety in this section. Professors Johnson and Bogomolny acknowledge the substantial contributions of Richard Bonnie, Carolyn Jenne, Jaroslawa Johnson and Judy Witherspoon. The Commission acknowledges the assistance of the attorneys who supervised the data gathering at the field level: Geoffrey Smith and Susan Cooper (San Mateo), John Boyer (Douglas County), Andrew Silverman (Tucson), Thomas Decker (Cook County), Robert Bogomolny (Dallas), Jane Lang McGrew (Maryland), Charles Whitebread (Rural Virginia), Patricia Wallace (Washington, D.C.), and Michael Valentine (Northern Virginia).

¹ See part two, chapter I of this appendix.

² *Id.*

consistent with constitutional definitions of fairness and legitimacy raises serious issues.³ Concern has been expressed about the extent to which current marihuana statutes encourage police misconduct, particularly in the area of search and seizure procedure.⁴ Another question concerns the selective enforcement of marihuana statutes and the consequences of a law bearing unequally on age, racial and occupational groups.⁵ Finally, questions have been raised about whether the criminal processing of marihuana defendants is an appropriate way of handling the population involved. It has been argued that both the stigma and severe penalties associated with marihuana offenses are not only undesirable but also damage the credibility, integrity and effectiveness of the criminal law and its enforcement system.⁶

A growing sensitivity to these questions has reopened the issue of cannabis. A gradual replacement of incomplete and erroneous information with recent research findings on the effects of marihuana use, together with an increasing amount of first-hand experience, apparently have resulted in ambivalent public opinion, particularly among young persons, concerning the prohibition of marihuana.⁷ Among legal scholars and social scientists, the issue of cannabis has reopened along other lines resulting in a new commitment to review and evaluate the marihuana statutes in a way focusing specifically on the relationship between goals and results.

This study aims to provide a systematic description of the experiences, from detection to final disposition, of over 3,000 persons arrested for marihuana offenses. The basic data were retrieved primarily from police, prosecutorial and court records in six metropolitan jurisdictions throughout the United States. The study differs in two important dimensions from previous efforts in this area. First, previous analyses have been limited by both the quantity and quality of observational data. Factual information concerning the process-

ing of marihuana defendants has been generally absent, and most discussions in this area have been based on speculation. Although this study does not solve all of the substantial problems associated with data collection in this area, it has compiled a more systematic data file than was ever done before. The second distinguishing characteristic is the attempt to avoid judgmental analysis. This study aims at description. In many areas of research, competent men of good will disagree about the meaning of basic data. In the area of marihuana, where much of the intellectual give and take has been couched in terms of costs and benefits, alienation and morality, honest differences in opinion may be anticipated. The problem, of course, is that not all persons agree on which consequences are costly or beneficial, what causes alienation and what role public morality ought to play in regulating freedom of choice. Because of these problems such judgments have been left to the reader.

The specific questions which generated this study pertain to how marihuana statutes are enforced. These questions concern a wide range of situations, from circumstances of detection and arrest through prosecutorial and judicial disposition; they focus on not only the behavior of marihuana defendants but also on that of the police, prosecuting attorneys and judges. With varying degrees of success and depth, this research addressed the following questions:

(1) Can the marihuana defendant be described in terms of a demographic profile? Do particular age, racial, educational or occupational groups contribute disproportionately to the marihuana arrest population?

(2) How is the marihuana defendant similar to, or different from, other offenders, the general population of marihuana users, other drug users? Are the marihuana offenders persons who would not otherwise be involved in the criminal process?

(3) What are the circumstances under which marihuana arrestees come to the attention of the police? What kind of investigational strategies are used and which law enforcement agencies are involved in the detection of marihuana offenses? To what extent are arrest and search warrants utilized in marihuana arrests?

(4) What are the circumstances under which marihuana arrestees are apprehended? What are the physical locations of such arrests? What amounts of the drug are seized?

(5) How are marihuana defendants processed? With what offenses are they charged? What is the amount of bail set? To what extent are marihuana defendants charged, dismissed and tried? To what

³ See generally Project, *Marihuana Laws: An Empirical Study of Enforcement and Administration in Los Angeles County*, 15 U.C.L.A. L. Rev. 1499 (1968) [hereinafter cited as *U.C.L.A. Study*].

⁴ See generally R. Bonnie and C. Whitebread, *The Forbidden Fruit and the Tree of Knowledge: An Inquiry into the Legal History of American Marihuana Prohibition*, 56 Va. L. Rev. 971-1203 (1970).

⁵ Note, *Possession of Marihuana in San Mateo County: Some Social Costs of Criminalization*, 22 Stan. L. Rev. 101 (1969) [hereinafter cited as *San Mateo Study*].

⁶ See generally J. Kaplan, *Marihuana: The New Prohibition* (1970).

⁷ H. Abelson, R. Cohen and D. Schryer, *Public Attitudes Toward Marihuana* 1-9, December 14, 1970 (Study prepared for the National Commission on Marihuana and Drug Abuse), part of this appendix.

extent are pretrial and trial motions made, granted or denied? To what extent do defendants plead guilty?

(6) What sentencing procedures are utilized with respect to marihuana defendants? How many defendants are ultimately sentenced and for what offenses? To what extent are the defendants fined, placed on probation or incarcerated?

Although issues identified earlier are implicit in many of these questions, the research attempts to describe, in neutral terms, the operation of the present marihuana law enforcement system. Only after an adequate description of these procedures is formulated, can the consequences and the efficacy of criminal sanctions for marihuana control in the United States be evaluated.

METHOD

The issues outlined above led the National Commission on Marihuana and Drug Abuse to design a research project which would develop statistical data on arrests of marihuana offenders in the United States. The study began within the Commission in the late spring of 1971 and later required the involvement of many other persons outside the Commission. Research design and instrumentation were the responsibilities of the Commission staff. Field work for the study was supervised overall by the Commission staff and locally by nine attorneys retained for this purpose by the Commission. Actual data collection was performed by teams of college youth consultants to the Commission and by selected data collectors. Preparation of the basic data file was contracted to the Institute for Survey Research, Temple University. Finally, the authors, consultants to the Commission, designed the analysis format, performed the analysis and prepared this report.

Procedures

This study required a recording instrument which would facilitate retrieval of statistical data from a variety of official records for both adult and juvenile marihuana offenders in 18 separate jurisdictions. This requirement included a tolerance of variations in recording procedures and content. In addition, data recording procedures were required which permitted detailed analysis of each arrestee's progression through defined phases of the criminal process. These requirements, simultaneous flexibility and completeness, created unusual design problems; since the solutions to these problems could not be answered by previous research, the Commission fielded an unusually lengthy and detailed questionnaire. The instru-

ment used in this study is far more comprehensive than any used previously, and not all of the data have been analyzed in this report.⁸

Construction of the recording instrument benefited partly from findings of earlier studies; but more generally, by consideration of theoretically possible variations in the processing of marihuana defendants. Certain portions of the original instrument were thus revised after procedural differences among the jurisdictions became apparent during pretests of the instrument.

Selection of jurisdictions for this study involved a series of compromises between a concern for representatives, on the one hand, and opportunity of access, on the other. It was not possible, either in terms of jurisdictional cooperation or of the requirements imposed by time, to retrieve data from all jurisdictions in the country or even to sample them systematically. The criteria of timely access and the need for simultaneous data collection resulted in the selection of jurisdictions listed in Table 1. Although systematic sampling was not achieved, the selected jurisdictions provide considerable heterogeneity in size, region, population characteristics and jurisdictional procedures and policies. These selection procedures provided a population of 3,071 arrestees, 2,491 adults and 580 juveniles.⁹ The respective contribution of each jurisdiction to the study population is shown in Table 1.

Data were collected for the study in the summer of 1971 by teams of interviewers, organized and prepared by the Commission to examine police, prosecutorial, judicial and probation records in each jurisdiction. Each team was supervised by an attorney familiar with the jurisdiction and its law enforcement agencies. Team supervisors met initially with the Commission staff to develop uniform collection procedures and to identify areas of data collection where jurisdictional variations required additional attention. Each team supervisor was responsible for pretesting the instrument

⁸ See questionnaire, Appendix A, *infra* page 695.

⁹ The terms "adult" and "juvenile" are used in this study to refer to that segment of the criminal justice system which ultimately disposed of the case. These designations were easily determined in almost all cases. In two kinds of situations, however, the adult-juvenile designation was unclear. In some situations, a case began in the adult system, either because the arrestee's age was not determined or because the prosecutor exercised discretion to utilize the adult system for arrestees of certain ages, and was later referred to the juvenile system. In this study, such cases are designated as "juvenile." In other situations, cases began in the juvenile system and were later transferred to the adult system by the judge under a statutory provision permitting "waiver of jurisdiction" for certain offenses. In this study, such cases are designated as "adult."

Table 1

<u>Jurisdiction</u>	<u>Sampling Procedure</u>	<u>Total</u>	<u>Adult</u>	<u>Juvenile</u>
<u>Washington Metropolitan Area</u> ¹⁰		959	678	281
Washington, D.C.	all cases	390	318	72
Prince George's County, Md.	all cases	180	134	46
Montgomery County, Md.	all cases	224	110	114
Fairfax County, Va.	all cases	75	46	29
Arlington County, Va.	all cases	58	40	18
Prince William County, Va.	all cases	8	6	2
Alexandria, Va.	all cases	24	24	0
<u>Chicago Metropolitan Area</u>		864	789	75
Chicago, Illinois ¹¹	one-in-ten (adult only)	362	358	4
Cook County, Illinois ¹²	all cases	502	431	71
Dallas, Texas	all cases	850	726	124
San Mateo County, Calif. ¹³	one-in-two	140	83	57
Tucson, Arizona (Pima County) ¹⁴	one-in-three	127	85	42
Omaha, Nebraska ¹⁵	all cases	113	113	0
Rural Virginia (Charlottesville, Albemarle County, Green County, Louisa County, Madison County) ¹⁶	all cases	18	17	1
<u>Total</u>		3,071	2,491	580

¹⁰ In the process of selecting jurisdictions, the Commission staff viewed the Washington Metropolitan Area as a single entity, but expected to find divergent enforcement patterns in the suburbs as compared to the District. Depending on how finely one wishes to analyze the data, the area represents seven discrete jurisdictions or three less well-defined jurisdictions (Maryland suburbs, Virginia suburbs and Washington). To facilitate analysis, the latter approach is utilized.

¹¹ In the city of Chicago, the sample was drawn by selecting every tenth marijuana-related case from the chronological log of arrests compiled by the police. This procedure was followed only for arrestees initially processed as adults. Juvenile records are indexed at the police level only by name. Since there was no chronological or substantive separation of files, it was impossible to identify the universe of juveniles arrested for marijuana offenses during a specific time period. Accordingly, arrestees entering the system as juveniles are not included.

¹² Other than the City of Chicago, Cook County includes 119 municipalities, each with its own police department. The residual area of the county is under the jurisdiction of the County Sheriff. To compile the universe of arrestees in Cook County, each case in the County Sheriff's files was analyzed. With regard to the municipalities, the Commission requested each Chief of Police to photocopy the arrest record of each person arrested for a marijuana offense during the survey period, indicate the disposition of each case, and forward the information to the Chicago

supervisor. With the cooperation of the County Sheriff, 92 of the suburban jurisdictions (77%) reported. Thirty-five (38%) of the reporting jurisdictions indicated that they had made no marijuana arrests during the survey period.

¹³ Every other case during the survey period was sampled in each of the sub-jurisdictions of the Southern Judicial District of San Mateo County: Atherton, Menlo Park, Redwood City, San Carlos and the unincorporated areas under the jurisdiction of the County Sheriff and the California Highway Patrol. In each of the municipalities, the universe was compiled from the chronological contact log. However, since neither the Sheriff nor the Highway Patrol maintain such a cross-reference system (files are kept alphabetically) the sample was drawn from individuals who were booked (charged).

¹⁴ The Tucson (Pima County) sample consisted of a random sample of one-third of the marijuana-related arrests made by the Tucson Police Department. During the survey period, 381 persons (256 adults and 125 juveniles) were arrested for marijuana-related offenses.

¹⁵ During the survey period, the Omaha Police Department arrested 128 persons (113 adults and 15 juveniles). The sample consists only of the adult cases, since the juvenile records were inaccessible.

¹⁶ Since the number of cases in the rural Virginia universe is so small, no further reference will be made to this jurisdiction.

in his jurisdiction, obtaining access to relevant police and court records, and supervising the actual data collection and recording. In addition, the supervisor was responsible for interviewing a select number of law enforcement personnel within the jurisdiction.

Data collection teams in each jurisdiction followed a series of guidelines drafted by the Commission staff to insure uniformity. In each jurisdiction, for example, police records were examined first in order to define the universe of persons arrested within the survey period of July 1 through December 31, 1970. This period was thought to offer the most current data with the minimum number of pending cases.

Methodological Problems

A number of caveats concerning the procedures followed in this study affect the interpretation of findings and should be identified. First, the procedures in selection of jurisdictions may limit the extent to which observed patterns of law enforcement practices are representative of other jurisdictions in the United States. The absence of systematic sampling does not necessarily indicate that the patterns observed in this study are not representative or that this study's findings cannot be generalized to other, unstudied populations. The problem is that there is no assurance that such analytical procedures are appropriate. In a hypothetical study employing systematic sampling, the limits of representativeness and generalization are known. Therefore, the findings of the present study may not be characteristic of all marihuana defendants in the United States during 1970.

The problems associated with the use of police and court records are well known.¹⁷ Studies of criminal procedure must also be sensitive to inter-jurisdictional variation in the substantive law and in criminal procedure. Neither the criminal procedure nor the substantive criminal law is uniform among jurisdictions. At the time of this study, in some jurisdictions, for example, possession of marihuana was a felony; in others possession was a misdemeanor; in still others, the prosecutor could file the complaint as either a felony or a misdemeanor. These variations affected the charges which were brought, the informal dispositional

alternatives and the formal dispositional and sentencing alternatives.¹⁸ With respect to juveniles, the jurisdictions in this study tended to define juveniles as persons under the age of eighteen.¹⁹

When significant jurisdictional differences occur it is necessary to determine whether such differences are attributable to variations in jurisdictional legal structure or to extralegal considerations. Analysis is complicated by variances in plea and termination procedures among district attorneys; these differences in procedure may determine the point in the criminal process at which the outcome

¹⁸ The marihuana laws of the sample jurisdictions provided the following penalties for possession and sale during the survey period (July 1, 1970–December 31, 1970):

State	Citation	Possession	Sale
Arizona.....	Ariz. Rev. Stat., Ann. Sec. 36-1001 to 1002.10, 1017 (Supp. 1969).	0-1 year in county jail/\$1,000 max.; or 1-10 years. 2d offense, 2-20 years.	2-10 years. 2d offense, 5-15 years.
California....	Calif. Health and S. Code, Sec. 11530-11533 (West 1964), as amended (Supp. 1970).	County jail for 1 year max. or 1-10 years. 2d offense, 2-20 years.	5 years-life. 2d offense, 5 years-life.
Illinois.....	Ill. Ann. Stat., Ch. 38, Sec. 22-1 to 53 (Smith-Hurd 1964), as amended (Supp. 1970).	Less than 2.5 grams, 0-1 year/\$1,500 max.; over 2.5 grams, 2-10 years/\$5,000 max. 2d offense, less than 2.5 grams, 2-10 years/\$5,000 max.; over 2.5 grams, 5 years-life.	10 years-life. 2d offense-life.
Maryland....	Md. Ann. Code, Art. 27, Sec. 276-302 (1967).	2-5 years/\$1,000 max. 2d offense, 5-10 years/\$2,000 max.	2-5 years/\$1,000 max. 2d offense, 5-10 years/\$2,000 max.
Nebraska.....	Ch. 197 (1969), Nebraska Acts.	Less than 25 cigarettes, 7 days; more than 25 cigarettes, 1-5 years. 2d offense, 1-5 years.	2-5 years. 2d offense, 2-5 years.
Texas.....	Tex. Pen. Code, Art. 7256 (1960), as amended, (Supp. 1969-70).	2 years-life, 2d offense, 10 years-life.	5 years-life. 2d offense, 10 years-life.
Virginia.....	Va. Code Ann. Sec. 54-524.1 to 109 (Supp. 1970).	0-12 months/\$1,000 max. 2d offense, 0-12 months/\$10,000 max. or 2-20 years/\$10,000 max.	1-40 years/\$25,000 max. 2d offense, 10 years-life/\$50,000 max.
District of Columbia.	D.C. Code Ann. Sec. 33-401 to 425 (1968).	0-1 year/\$100-\$1,000. 2d offense, 0-10 years/\$500-\$5,000.	0-1 year/\$100-\$1,000. 2d offense, 0-10 years/\$500-\$5,000.

¹⁹ See, e.g. Ariz. Rev. Stat. Ann. § 8-201 (Supp. 1971-72) (any person under 18); Cal. Welf. and Inst'n's Code § 707 (Supp. 1972) (any person under 18); Ill. Rev. Stat. ch. 37, § 702-2 (Supp. 1972) (male: under 17; female: under 18); Md. Ann. Code art. 26, § 70-1 (Supp. 1971) (any person under 18); Tex. Rev. Civ. Stat. Ann. art 238-1 (any person under 18); Tex. Rev. Civ. Stat. Ann. art 238-1 § 3 (Supp. 1968) (male: under 17; female: under 18); Va. Code Ann. § 16.1-14(3) (1960) (any person under 18); D.C. Code Ann. § 11-1551 (1966) (any person under 18).

¹⁷ See Sellin and Wolfgang, *The Measurement of Delinquency* (1964); *The Challenge of Crime in a Free Society*, A Report of the President's Commission on Law and the Administration of Justice (1967), 18-31; Mandel, *Problems with Official Drug Statistics*, 21 Stan. L. Rev. 991 (1969).

of the case is decided and even the contours of the disposition. Since the principal interest is in describing general patterns without regard for insignificant variations, jurisdictional differences are identified only when they are of sufficient magnitude to alter overall patterns.

A similar procedure is followed with regard to adult-juvenile differences; adults and juveniles are sometimes examined separately, although they are grouped for some analyses.

FINDINGS ²⁰

The results of this study are presented in three sections. The first describes the arrestees in terms of demographic characteristics, history of drug use and contact with law enforcement agencies prior to this marihuana arrest. The second section describes the circumstances under which the study population was detected and arrested, reviewing the use of investigations prior to arrest and the physical locations of these arrests. Additionally, the use of warrants, reasons for police presence, and the incidence of drug "buys" are examined. A third section describes post-arrest dispositions of these cases, focusing on both ultimate disposition and specific procedures followed in various phases of the criminal system.

²⁰ Although the findings described in the following pages generally involve quantitative comparisons, tests of statistical significance are not used. We have not employed such tests for several reasons. First, tests of statistical significance ordinarily require a number of assumptions pertaining to sampling procedures. Since we do not purport to have a random or even systematic sampling of marihuana cases, certain assumptions of these tests are not met, and the tests were therefore not performed. Second, this study is an exploratory effort, not a confirmatory one. The study produced a considerable body of data, and we have been selective in presentation of these data. The fact that statistical significance is also a function of the absolute number of tests (for example, statistically significant relationships would be found in five of every 100 tables by chance alone) reinforced our reluctance to use such tests. Third, we have attempted to avoid confusing statistical with substantive significance. Although we have attempted to identify both the existence of relationships, and their strength, we feel that in this area, statistical significance often may be confused with substantive significance. Not all statistically significant findings are of substantive importance. To avoid confusion concerning the criterion of "significance," we elected to omit statistical tests. Instead, we have used a guideline of 10 percentage points difference. In most groups a 10% difference is statistically significant, except in comparisons of populations of very small numbers. We have attempted to be sensitive to the size of *n*, and we have been reluctant to report relationships when the *n*'s are less than 20.

The Arrestees

DEMOGRAPHIC CHARACTERISTICS ²¹

The typical marihuana arrestee is a young, white, single male who is a permanent resident of his jurisdiction and is either employed as a blue collar worker or is attending school.

A substantial majority of these arrestees are male (85%), white (77%), comparatively young (58% are under 21), and permanent residents of the jurisdictions within which they were arrested (77%). The data in Table 2 indicate that a majority of arrestees are unmarried (57%) and, at the time of arrest, were either employed or enrolled as students (70%). A minority of the arrestees (11%) was unemployed. The general youthfulness of the entire arrest population is indicated by the finding that five percent of all arrestees were 31 or older at the time of arrest. Among juveniles, over half (53%) were 16 or under at the time of arrest. Adult-juvenile differences show that proportionately more juvenile arrestees are female (25%), unmarried (91%), white (90%), permanent residents (88%) and students (78%).

With a few exceptions these demographic characteristics are uniform across jurisdictions. Although ten percent of all arrestees are age 16 or under, proportionately more persons in this age category are found in Maryland (27%) and in Dallas (25%). On the other hand, less than one percent of arrestees in Omaha (.3%) are in this age group. In regard to race, the majority of arrestees in all jurisdictions except one are white, ranging from 71% in Tucson to 94% in Maryland. The exception in racial composition is found in Chicago where 53% of all arrestees are black and 43% are white. By contrast, in Washington, D.C., 63% of arrestees are white and 36% black. The lowest incidence of black arrestees is found in San Mateo (5%) and Cook County (6%).

With regard to mobility,²² a majority of arrestees in all jurisdictions except one are permanent

²¹ Various biographical data pertaining to each arrestee's gender, age, race, occupation and place of residence were ordinarily available. In two areas of demographic characteristics, however, pertinent information was often incomplete or unknown. Data concerning the arrestee's educational level were unknown in about 70% of the cases. Data concerning marital status were unknown in about 30% of the cases, and this information is reported here with the appropriate interpretation caveat.

²² Persons who were permanently employed and resided in the jurisdiction within which they were arrested were designated as permanent. Semi-permanent includes temporary residence such as college students and military personnel. Persons arrested in metropolitan areas, but who lived in suburbs of those areas, were designated as suburban.

**Table 2 Demographic Characteristics
of Arrestees**

Number of People	<u>Total</u> 3071	<u>Adults</u> 2491	<u>Juveniles</u> 580
<u>Gender</u>			
Male	85%	88%	75%
Female	15	12	25
Unknown			0
<u>Age</u>			
< 16	10	*	53
17 - 18	24	20	41
19 - 20	24	29	2
21 - 22	15	19	*
23 - 24	10	12	*
25 - 26	5	6	0
27 - 28	3	3	0
29 - 30	2	2	0
31 +	5	7	0
Unknown	3	2	3
<u>Marital Status</u>			
Single	57	49	91
Married	8	10	1
Married, Common Law	*	*	0
Divorced	2	2	*
Separated	1	1	0
Widowed	*	*	0
Unknown	32	38	8
<u>Race</u>			
White	77	73	90
Black	21	23	7
American Indian	*	*	0
Spanish-speaking	2	2	2
Other	*	*	*
Unknown	1	1	3
<u>Mobility</u>			
Transient	11	12	6
Semi-Permanent	4	5	*
Permanent	77	75	88
Suburban	4	4	5
Unknown	4	4	1
<u>Occupation</u>			
Student	27	15	78
Criminal Employment	1	1	0
Blue Collar	28	33	4
White Collar	15	18	2
Military	2	3	0
Unemployed	11	13	6
Unknown	16	17	11

* indicates less than one percent

residents, ranging from 65% in Tucson to 86% in Cook County. In Washington, half of all arrestees are permanent. Arrestees with transient status, constituting 11% of the entire population, are more often found in Omaha (27%) and Tucson (20%) but less often in Maryland (4%) and Chicago (6%). Arrestees with suburban residences constitute 4% of the entire population and are more often found in Washington, D.C. (28%).²³

Several jurisdictions show substantially different distributions of student and occupational statuses. Although students constitute 27% of the entire population, their representation is higher in San Mateo (49%), Tucson (42%), and Maryland (39%). Students are underrepresented among arrestees in Omaha (14%) and Chicago (13%). Three jurisdictions depart from the overall distribution of blue collar workers (28%). Proportionately fewer blue collar arrestees are found in Tucson (15%), proportionately more in Omaha (47%) and Chicago (43%). There are essentially no jurisdictional differences in the distribution of white collar and unemployed arrestees or those with military status.

For two jurisdictions, the general profile requires some revision. In Omaha and Chicago the typical arrestee is somewhat older, somewhat more likely to be a blue collar worker and less likely to be a student. And, in Omaha the arrestee is somewhat more likely to be a transient, while in Chicago, he is considerably more likely to be black.

HISTORY OF DRUG USE

When the survey instrument was designed, the Commission staff included an item intended to extract information regarding the drug experience of the arrestees. As was expected, the records of the various agencies of the criminal justice system rarely included such information. As indicated in Table 3, the records regarding 82% of the arrestees did not contain such information.²⁴ Juvenile records were no more likely to include such information than adult records (81% to 83%).

²³ Because of the geographical location of Washington, D.C., significant numbers of the arrestees reside in Maryland and Virginia.

²⁴ The absence of such information may itself be of substantive significance. We believe that one determinant of the inclusion of drug history data in official records may be serious involvement in, or regular use of, "hard drugs." The general absence of such information may reflect the fact that most marihuana arrests were made independent of general drug investigations or investigations of narcotics traffic. The data suggest that marihuana arrests generally were not ancillary to nonmarihuana-drug surveillance and detection activity. This seems to document another dimension of the generally "spontaneous" character of marihuana arrests (discussed in more detail below).

In the 18% of the cases where such information was available, it was generally compiled on the basis of police questioning of the arrestees. In some jurisdictions, such as San Mateo, Dallas and the juvenile system of the District of Columbia, arrestees were systematically asked about their experiences with a list of drugs. In other jurisdictions, the availability of information was not so consistent.

The data in Table 3 indicate that where information was available, prior marihuana experience was indicated for 88% of the arrestees. Duration of use was indicated in 60% of the cases and was evenly distributed. About a third of the known users indicated that they had used the drug for a year or less prior to arrest. About 13% indicated that they had used the drug for three years or more.

Apart from marihuana, use of other drugs was rarely indicated. Heroin, LSD and amphetamine use was indicated in about 10% of the cases where information was available. Recorded barbiturate and cocaine use were exceedingly uncommon. Twenty-five of the more than 3,000 arrested were indicated to have been heroin addicts at the time of their marihuana arrests (14 of these were in Washington, D.C.).

These patterns of prior drug use are relatively uniform throughout the jurisdictions studied. One jurisdiction, San Mateo, departs from the general pattern. In San Mateo, records (which were generally available) indicated that 61% of the arrestees had prior experience with marihuana (44% with marihuana alone and 17% with marihuana and other substances). Use of LSD or amphetamines was reported for 12% and use of barbiturates for 9% of San Mateo arrestees.

PRIOR POLICE CONTACT²⁵

Most marihuana arrestees have had no prior police contact, the present marihuana arrest constituting the initial experience with law enforcement agencies for 83% of juveniles and 66% of adults. A prior arrest record is more common among adults (34%) than juveniles (17%). Less than a third (31%) of all arrestees had a prior arrest for any offense.

Jurisdictions differ in this regard. More than half of the arrestees in Chicago (58%) and San Mateo (58%), and almost half in Omaha (46%), have prior arrests of some kind. Correspondingly, smaller proportions of arrestees have prior records

²⁵ Prior police contact includes only recorded encounters that resulted in an arrest and/or conviction. Information concerning prior arrests was unavailable or unknown for 25% of the arrestees.

Table 3 Arrestees History of Drug Use

	<u>Total</u>	<u>Adults</u>	<u>Juveniles</u>
Number of people	3071	2491	580
Information not available	82%	83%	81%
<u>Marihuana</u>			
Used Marihuana	16	15	16
Under 1 Year	2	1	3
1 Year	3	2	3
2 Years	2	2	2
3 Years or more	2	3	1
Length Unknown	7	7	7
No Use of Marihuana Indicated	2	2	2
<u>LSD</u>			
Used LSD	2	2	2
No LSD Use Indicated	16	15	17
<u>Amphetamines</u>			
Used Amphetamines	2	2	2
No Amphetamine Use Indicated	16	15	17
<u>Barbiturates</u>			
Used Barbiturates	1	1	*
No Barbiturate Use Indicated	17	16	19
<u>Heroin</u>			
Used Heroin	2	2	2
Currently Addicted (n=25)	1	1	*
No Heroin Use Indicated	15	15	17
<u>Cocaine</u>			
Used Cocaine	*	1	*
No Cocaine Use Indicated	17	17	19

* Indicates less than one percent

in Cook County (12%), Maryland (19%) and Virginia (23%). The incidence of prior records is similar in Washington, D.C. (27%), Dallas (32%) and Tucson (33%).

Although prior arrest records are generally uncommon among these arrestees, a prior drug arrest is even rarer. Table 4 indicates that substantial proportions of adults (79%) and juveniles (88%) had no prior drug arrests. Thus, about eight in ten marihuana arrestees had never before been arrested for a drug offense.

Among persons having prior arrest records, the arrest is more likely to have been a nondrug than drug offense. In short, comparatively small proportions of these arrestees have prior arrest rec-

ords for either drug, or drug-related offenses (21% of adults and 12% of juveniles) or nondrug offenses (30% of adults and 16% of juveniles). The data in Table 4 also indicate that among arrestees with prior records, the modal number of arrests is one. Again, proportionately more adults have had more arrests than juveniles for either drug or nondrug offenses.

Individual jurisdictions are generally uniform in this regard with two minor variations. The incidence of prior drug arrests is somewhat higher in Omaha (37%) and Chicago (26%); in Omaha, proportionately more arrestees (24%) have had a nonmarihuana drug arrest.

Table 4 Arrestees' Prior Police Contact

Number of People	<u>Total</u> 3071	<u>Adults</u> 2491	<u>Juveniles</u> 580
<u>Prior Arrest Record</u>			
Prior Arrests	31%	34%	17%
No Prior Arrests	44	43	49
Unknown	25	23	34
<u>Prior Drug Arrests</u>			
Inapplicable (None; Unknown)	69	66	83
No Prior Drug Arrests	11	13	5
Prior Drug Arrests	19	21	12
1 Arrest	8	9	3
2 Arrests	3	3	1
3 Arrests	1	1	*
4 Arrests	*	*	0
5 Arrests	*	*	0
More than 5	*	*	0
Number Unknown	7	7	8
<u>Prior Nondrug Arrests</u>			
Inapplicable (None; Unknown)	69	66	83
No Prior Nondrug Arrests	3	4	1
Prior Nondrug Arrests	27	30	16
1 Arrest	10	12	6
2 Arrests	4	4	2
3 Arrests	3	3	2
4 Arrests	1	1	1
5 Arrests	1	2	1
More than 5	4	4	1
Number Unknown	4	4	3
<u>Prior Drug Convictions</u>			
Inapplicable	88	86	95
No Prior Drug Convictions	3	4	2
Prior Drug Convictions	9	10	3
1 Conviction	3	4	1
2 Convictions	1	1	0
3 Convictions	*	*	0
4 Convictions	*	*	0
5 Convictions	*	*	0
More than 5	0	0	0
Number Unknown	4	5	2
<u>Prior Nondrug Convictions</u>			
Inapplicable	77	74	87
No Prior Nondrug Convictions	4	4	5
Prior Nondrug Convictions	19	21	8
1 Conviction	7	8	3
2 Convictions	2	3	1
3 Convictions	1	1	0
4 Convictions	1	1	*
5 Convictions	*	*	*
More than 5	1	1	0
Number Unknown	7	7	5
<u>Prior Incarceration</u>			
Inapplicable	69	66	83
No Prior Incarceration	14	15	9
Prior Incarceration	6	7	1
Unknown	11	12	8

*Indicates less than one percent

Table 4 also indicates that the general incidence of prior convictions is comparatively low for both drug offenses (9%) and nondrug offenses (19%). Stated differently, 91% of the arrestees have had no prior drug convictions, and 81% have had no prior nondrug convictions. Six percent of these arrestees have been incarcerated for any offense. Again, adults are more likely than juveniles to have been convicted or incarcerated. Among the 580 juveniles, 97% have had no prior drug conviction.

Several jurisdictions differ with regard to prior drug and nondrug convictions. Prior drug convictions (overall 9%) were somewhat more common in Omaha (15%) and somewhat less common in Cook County (4%), Maryland (3%) and Virginia (1%). Some jurisdictions also differ from the general pattern of nondrug convictions. The overall incidence of 19% is exceeded in both San Mateo (37%) and Chicago (36%). These differences are consistent with the earlier finding of a greater incidence of prior nondrug arrests in these jurisdictions. Prior nondrug convictions were somewhat less common in Cook County (7%) and Virginia (10%).

Tables 5 and 6 show other variations in prior police contact. The data in Table 5 indicate that the incidence of prior arrests is associated with gender, age and race. Males are more likely than females to have prior arrest records, although this difference is substantial only for nondrug arrests. Males and females do not differ greatly in prior drug arrests. Age also is associated with police contact, with persons over the age of 22 having a higher incidence of prior arrests. Arrestees 18 and under are different from their older counterparts mostly in regard to prior nondrug arrests.

Race differences are also suggested by the data in Table 5. Proportionately fewer whites than blacks have prior arrest records; and this is especially true in regard to nondrug offenses. Among whites, prior nondrug arrests (18%) are somewhat more common than prior drug arrests (11%). Among blacks, prior nondrug arrests (44%) are much more common than prior drug arrests (17%). The incidence of prior arrest records among Mexican-Americans is intermediate between the other two groups. The occurrence of a marijuana arrest is likely to be the first police contact among whites, and to a lesser extent among Mexican-Americans, but considerably less likely to be so among blacks.

Table 5 also indicates that various occupational groups differ in prior arrests, but again the largest differences are for nondrug offenses. Students have comparatively low incidences of prior ar-

rests for drug offenses (8%), and they are about as likely to have a nondrug record (14%) as white and blue collar workers are to have a prior drug record. Similar proportions of blue collar (16%) and white collar (15%) workers have prior drug arrests. Prior nondrug arrests, however, are much more common among blue collar (36%) than white collar (21%) workers. Table 5 also indicates that variations in mobility are generally unrelated to prior drug and nondrug arrests. Transient persons are no more likely than permanent residents to have had prior drug or nondrug arrests.

Table 6 presents comparable data pertaining to prior convictions. Males are more likely than females to have a prior conviction, particularly for nondrug offenses. Fourteen percent of the males and 4% of the females have a prior nondrug conviction. The relationship between age and the incidence of prior convictions varies according to the nature of the offense. For prior drug convictions, persons 31 and over are considerably more likely to have had one or more convictions than persons 30 and under. For nondrug offenses the relationship between age and prior convictions appears to be linear: with increasing age, there is an increasing incidence and absolute number of prior convictions. The considerable variation in prior nondrug convictions is shown in the differences between persons 16 and under (3% prior nondrug convictions), 25 to 26 (25% prior nondrug convictions) and persons 31 and over (35%).

Race differences are also suggested by the data in Table 6; the differences are associated primarily with nondrug offenses. Blacks are three times more likely than whites to have a prior nondrug conviction. Compared to convicted whites, blacks are four times more likely to have two or more such convictions. Occupational groups also differ in prior convictions, and the difference again pertains only to nondrug offenses. Although students and unemployed arrestees are no more likely to have prior convictions for a nondrug than a drug offense, blue and white collar arrestees are much more likely to have a nondrug than drug conviction. Blue collar workers are twice as likely as white collar workers and seven times as likely as students to have a prior nondrug conviction.

In regard to mobility, the incidence of prior drug convictions is relatively uniform and low (from 4% to 5%) among arrestees designated as transient, semipermanent, permanent and suburban. However, transient and permanent persons are more likely to have prior convictions for nondrug offenses.

To summarize, the majority of this arrest population has had no prior contact with either the ju-

**Table 5 Prior Drug and Nondrug Arrests
and Demographic Characteristics**

	Prior Drug Arrests				Prior Nondrug Arrests			
	(2490) 81%	(245) 8%	(241) 4%	(219) 7%	(2235) 73%	(321) 11%	(394) 13%	(121) 4%
	Inapplicable	One	2 or More	No. unknown	N.A.	One	2 or More	No. unknown
Gender								
Males (2622)	79%	9%	5%	8%	70%	11%	14%	4%
Females (446)	88	4	1	2	88	5	5	2
Age								
<16 (313)	90	3	1	7	85	5	7	3
17 - 18 (734)	85	7	3	6	82	7	7	4
19 - 20 (721)	82	9	4	5	75	12	9	4
21 - 22 (468)	82	7	2	9	72	12	12	4
23 - 24 (303)	75	11	5	9	64	15	16	5
25 - 26 (141)	72	9	9	10	58	11	29	1
27 - 28 (85)	72	9	12	7	61	18	18	4
29 - 30 (61)	74	7	8	12	49	10	36	5
31 + (166)	57	18	13	13	37	15	43	5
Unknown (79)	89	5	4	3	84	4	8	5
Race								
White (2350)	83	8	3	6	78	9	9	4
Black (623)	72	9	8	11	52	15	29	3
Spanish-speaking (73)	78	11	4	7	69	14	14	4
Unknown (16)	75	6	0	19	75	6	6	13
Occupation								
Student (828)	86	7	1	6	83	7	7	3
Criminal (23)	52	17	22	9	35	17	39	9
Blue Collar (856)	76	10	6	9	60	14	22	5
White Collar (461)	79	10	5	7	76	10	11	4
Military (69)	98	3	0	4	88	6	3	3
Unemployed (349)	75	10	8	8	68	14	14	4
Unknown (485)	86	5	3	6	79	9	9	3
Mobility								
Transient (331)	82	8	5	6	74	13	8	5
Semi-Perm (125)	87	8	2	3	88	5	4	3
Perm (2377)	80	9	4	8	71	11	14	4
Suburban (127)	87	2	3	7	87	6	4	2
Unknown (111)	79	5	8	7	67	14	14	5

Table 6 Prior Drug and Nondrug Convictions
and Demographic Characteristics

	Inapplicable	Drug One	2 or More	No. Un- known	Inapp.	Non-Drug One	2 or More	Number Unknown
Total	(2805)	(98)	(31)	(137)	(2492)	(211)	(157)	(211)
	91%	3%	1%	5%	81%	7%	5%	7%
Gender								
Males (2622)	91%	4%	1%	5%	79%	8%	6%	8%
Females (446)	96	1	*	3	93	3	1	3
Age								
<16 (313)	98	1	0	2	93	2	1	5
17 - 18 (734)	93	2	*	5	90	4	2	5
19 - 20 (721)	92	3	1	4	84	8	3	5
21 - 22 (468)	93	2	1	5	78	8	5	8
23 - 24 (303)	90	5	1	4	75	11	6	8
25 - 26 (141)	87	5	2	6	61	11	14	14
27 - 28 (85)	88	6	1	5	74	10	6	11
29 - 30 (61)	92	2	3	3	57	12	23	8
31 + (166)	75	8	7	10	48	10	25	17
Unknown (79)	91	5	0	4	91	3	2	4
Race								
White (2350)	92	3	1	4	86	5	3	6
Black (623)	89	4	3	5	62	13	14	12
Spanish-speaking (73)	90	1	0	8	81	7	6	7
Unknown (16)	94	0	0	6	88	6	6	0
Occupation								
Student (828)	94	2	*	4	90	3	2	5
Criminal Employment (23)	65	22	9	4	48	17	26	9
Blue Collar (856)	90	4	2	5	71	12	9	8
White Collar (461)	89	4	1	6	82	6	4	8
Military (69)	97	1	0	1	93	4	1	1
Unemployed (349)	87	5	2	6	79	7	5	9
Unknown (485)	95	2	1	2	86	5	4	6
Mobility								
Transient (331)	91	3	2	4	84	6	4	5
Semi-Permanent (125)	93	3	1	3	93	3	2	2
Permanent (2377)	91	3	1	5	80	7	6	8
Suburban (127)	95	2	2	2	90	4	2	5
Unknown (111)	93	3	2	3	79	9	7	5

* Indicates less than one percent

dicial or law enforcement systems. Nineteen percent of these arrestees have had one or more prior drug arrests and 27% have had a prior nondrug arrest. Seven percent of this population has had a prior marihuana or marihuana-related arrest. The nature of prior arrests is indicated by the data in

Table 7. Of the 12% of arrestees with one prior arrest, 60% were for nondrug offenses, 20% were for marihuana offenses, and 18% were for non-marihuana drug offenses. Of the 18% of arrestees with more than one prior arrest, nearly half (47%) were for nondrug offenses.

**Table 7 Number of Prior Arrests and
Type of Prior Drug Arrest**

	No Prior Arrests	One Prior Arrest	More Than One Prior Arrest	Arrest Record Unknown	Total
Total (3071)	(1354) 44%	(377) 12%	(561) 18%	(779) 25%	
No Prior Drug Arrest Record	100%	60%	47%	-	85%
Marihuana Arrest Only	-	20	14	-	5
Other Drugs Without Marihuana	-	18	22	-	6
Marihuana With Other Drugs	-	1	9	-	2
Prior Arrest/ Type Unknown	-	2	9	-	2

The data presented above also indicate that the incidence of prior convictions and prior incarceration is less common than arrests. Of the arrestees with prior arrests, 9% have been convicted of a prior drug offense and 19% of a prior non-drug offense. Six percent of these arrestees have been incarcerated prior to the current offense.

Prior criminal involvement is strongly associated with age. Although 58% of this population is under 21, this age group is least likely to have had prior criminal involvement. Present marihuana arrests occur disproportionately among persons without prior criminal involvement. Marihuana arrests are not unrelated to prior police contact; they are negatively associated with it.

Circumstances of Detection and Arrest

Examination of the conditions under which persons are arrested for marihuana offenses directs attention to patterns of law enforcement. For example, information concerning detection and arrest procedures presumably indicates the type of resources allocated to the enforcement of marihuana statutes. This study attempted to identify and describe the investigatory activity and the scope and intensity of such activity. The inquiry categorized prior drug or drug-related investigations as "short-term," "intermediate" or "long-term" and described the object of such investiga-

tions. An effort was made to identify the occurrence of drug "buys" and drug seizures, and the amount of drugs involved. An effort was made to identify the jurisdiction of the arresting officer and the participation of special units such as vic squads, narcotics agents or special investigation teams. Finally, attention was directed to the physical location and conditions of marihuana arrests. An attempt was made to identify the presence or absence of search and arrest warrants for indoor arrests, and to document the causes of police presence at outdoor and vehicle arrests. In each case the arrest was thoroughly documented and ancillary questions were pursued as raised.

PRIOR INVESTIGATIONS

"Prior investigation" was defined as any active engagement of the police or other law enforcement officials in the detection of drug, or drug-related offenses. In addition, three degrees of investigatory involvement were recognized. A "long-term investigation, thought to occur infrequently in marihuana cases, was defined as an intense investigation into major drug traffic in a community using undercover agents for at least 4 to 6 months. During a long-term investigation, each arrest was regarded as part of a much larger activity. An "intermediate" investigation, thought to be more common in marihuana cases, was defined as

focus on fewer individuals over a shorter period of time, using police informants and often resulting in marihuana and other drug "buys" by undercover agents. A "short-term" investigation, thought to be more common than the other two, was defined as all police activity devoted primarily to verifying offenses detected or reported by others, without undercover agents or police-supervised "buys." This research also attempted to identify the object of short-term, intermediate and long-term investigations. The possible objects were designated as marihuana, marihuana and other drugs or all drugs, including marihuana.

The data in Table 8 indicate that prior investigations were utilized in less than a third (30%) of all arrests. More than two-thirds (69%) of these arrestees were arrested spontaneously.²⁸ Long-term investigations were conducted in 1% of all arrests. Intermediate (10%) and short-term (16%) investigations were somewhat more common. The object of investigations was about as likely to be marihuana alone (13%) as all drugs, including marihuana (11%).

The information source in each investigation was ordinarily unobtainable (70%). Available data indicate that the most common information sources were independent complaints (7%) and undercover police (7%).

Jurisdictions do not vary greatly in investigative activity. In any jurisdiction studied, prior investigations were conducted in no more than 38% of the arrests (Maryland, 38%; Tucson, 37%; Omaha, 36%). Prior investigations were used less often in Cook County (18%), Washington, D.C. (20%) and Chicago (22%). As many as 80% of all arrests in Cook County and Washington, D.C., were made without prior investigations and as few as 53% in Virginia. Investigational scope is generally constant among jurisdictions. Long-term investigations (overall, 1%) were utilized in no more than 6% (Virginia) of the arrests in any jurisdiction. Intermediate investigations (overall, 10%) were more often used in Omaha (30%) and Virginia (21%) but less often in Chicago (1%) and Dallas (3%). Short-term investigations (overall, 16%) were used slightly more often in Dallas (22%) and somewhat less often in Omaha (6%).

Available data regarding information sources for jurisdictions indicate that independent complaints (overall, 7%) were more often designated in Virginia (21%), Maryland (19%) and Omaha (15%), and less often in Washington (2%) and Chicago (2%). Professional informants (overall,

4%) were used more often as information sources in Omaha (20%). Internal police information (overall, 3%) was designated more often in Virginia (15%).

Table 9 presents comparable data for investigated arrestees. Over half (55%) of all prior investigations were short-term, and although juveniles were about as likely as adults to be investigated, juvenile investigations were more often short-term (79%) than adult investigations (50%). Correspondingly, juvenile investigations were less often intermediate (18%) than were adult investigations (36%).

Adult and juvenile investigations also differed in their object and information source. Table 9 indicates that marihuana was more often the object of juvenile (57%) than adult (42%) investigations. Independent complaints were more often the principal information source in juvenile (43%) than adult (17%) investigations. Correspondingly, undercover police were utilized more often in adult (26%) than juvenile (12%) investigations.

Various demographic characteristics of arrestees are associated with prior investigatory activity. The data in Table 10 indicate that proportionately more females (38%) than males (28%) were investigated and investigations of females were more often short-term (23%) than investigations of males (15%). Persons under 20 were considerably less likely to be investigated than persons 21 and over, although scope and object did not vary significantly. Prior investigations were also less common among black arrestees (22%) than among white (32%) or Mexican-American (33%) arrestees. Investigations of white arrestees more often had only marihuana as their object (15%) than those of black (7%) or Mexican-American (8%) arrestees.

Table 10 indicates that white collar arrestees were more likely to be investigated (39%) than blue collar arrestees (30%), and much more likely to be investigated than students (27%) or military personnel (16%). Data concerning scope of investigation also suggest that white collar arrestees tended to be investigated more systematically than blue collar or student arrestees.

Investigatory activity also varies with the arrestee's place of residence and mobility. Persons with suburban residences were investigated less often (6%) than transient persons (21%), and semipermanent arrestees were more often involved in intermediate investigations (18%) than permanent (10%) or transient (7%) persons. Data concerning prior criminal involvement indicate that persons with prior records were more

²⁸ "Spontaneous" is used here to describe arrests which result from direct police-arrestee contact without prior investigation.

Table 8 Incidence of Prior Drug and
Drug-Related Investigations

Number of People	<u>Total</u> 3071	<u>Adults</u> 2491	<u>Juveniles</u> 580
<u>Prior Investigation</u>			
No Investigation	69%	68%	72%
Yes, Investigation	30	31	27
Unknown	2	2	1
<u>Scope of Investigation</u>			
Short-term	16	15	21
Intermediate	10	11	5
Long-term	1	1	0
Unknown	3	3	1
<u>Object of Investigation</u>			
Marihuana Alone	13	13	15
Other Drugs	1	1	*
All Drugs	11	11	7
Unknown	5	5	3
<u>Information Source</u>			
Informant	3	3	2
Pro. Informant	4	4	1
Arrestee Informant	1	1	2
Other Informant	1	1	*
Independent Complaint	7	6	13
Internal Police Info.	3	2	4
Undercover Police	7	7	3
Other	2	2	1
Unknown	70	70	72

* Indicates less than one percent

likely to have been investigated. Persons with prior arrest records, however, were not much more likely to be the subject of intermediate or long-term investigations.

BUYS AND SEIZURES

Of central importance among the circumstances of detecting a marihuana offense is the involvement of marihuana in the case, either by buy or by seizure.

A particularly concrete index of active investigative involvement is the incidence of "buys" or situations where an undercover policeman purchases drugs from potential arrestees. Data per-

taining to the incidence of "buys" are summarized in panel one of Table 11. Six percent of all arrests were preceded by undercover purchases (6% for adults and 3% for juveniles). In 5% of all cases, only marihuana was purchased. Jurisdictional patterns, not shown in Table 11, indicate that incidence of "buys" (overall, 6%) was somewhat higher in Omaha (13%), San Mateo (11%) and Northern Virginia (10%) and somewhat lower in Chicago (1%) and Tucson (2%).

The data in the second panel of Table 11 indicate that the undercover buys occurred primarily at the retail level. More than half of the purchases involved less than one ounce.

**Table 9 Investigated Arrestees and
Characteristics of the Investigation**

	<u>Total</u> 914	<u>Adults</u> 759	<u>Juveniles</u> 155
Number Investigated			
<u>Scope of Investigation</u>			
Short-Term	55%	50%	79%
Intermediate	33	36	18
Long-Term	3	4	0
Unknown	9	10	3
<u>Object of Investigation</u>			
Marihuana Alone	44	42	57
Other Drugs	3	4	1
All Drugs	35	37	28
Unknown	18	18	15
<u>Informant Source</u>			
Informant	8	8	8
Pro. Informant	11	13	3
Arrestee Informant	3	2	7
Other Informant	2	2	1
Independent Complaint	21	17	43
Internal Police Info.	7	7	10
Undercover Police	24	26	12
Other	2	2	3
Unknown	21	23	14

Table 12 indicates that 94% of all marihuana arrests involved the seizure of marihuana from the possession or presence of an individual or group of individuals. The records regarding 3% of all arrestees indicate that neither a "buy" nor a "seizure" was made in connection with their arrests.²⁷ Three percent of the arrests were preceded only by undercover "buys", with no additional marihuana seizures being made.

²⁷ The relationship between drug seizures and marihuana buys may be summarized as follows:

		SEIZURES		
		Yes	No	Total
Buys	Yes	(a) 3%	(b) 3%	6%
	No	(c) 91%	(d) 3%	94%
Total		94%	6%	

The 3% figure in cell (d) is enigmatic. Since the universe of cases was defined as all "marihuana-related arrests" during the survey period, it is not clear how marihuana was involved in these 95 arrests. The authors suspect that some of these persons were connected in some way with group arrests, but not in such a way that they were connected with the marihuana seizure. (The

The amounts of marihuana seized in connection with all arrests are also shown in Table 12. Eighteen percent of the arrestees were apprehended in connection with less than the equivalent of one marihuana cigarette (less than a gram). Another 23% involved the equivalent of between one and a maximum of 10 marihuana cigarettes (one to five grams). The equivalent of between 10 and a maximum of 50 cigarettes was involved in an additional 26% of the cases (6 to 30 grams). Thus, in at least two-thirds of the cases, less than an ounce was involved.²⁸ Seizures of more than one ounce of marihuana were documented in but 15% of all the cases. Table 12 also indicates that adults and juveniles do not differ greatly in either the incidence of seizures or in the amount seized.

data collectors were instructed to attribute the seizure in group arrests to each individual). It is also possible that some of these individuals were the subjects of marihuana-related investigations but that the circumstances of arrest were unrelated to marihuana. This is an answerable question, but time and the small number of cases precluded further analysis.

²⁸ An ounce equals 28.5 grams. For ease in calculation, the research instrument rounded this off to 30 grams.

**Table 10 Investigated Arrestees and
Demographic Characteristics**

	Prior Investigation			Scope of Investigation				Object of Investigation			
	Yes	No	UK	Short	Inter	Long	UK	M	Other	All	UK
Total (3071)	30%	69%	2%	16%	10%	1%	3%	13%	1%	11%	5%
Gender											
Male (2622)	28%	70%	2%	15%	10%	1%	2%	13%	1%	10%	4%
Female (446)	38	61	2	23	9	1	6	16	1	13	7
Age											
<16 (313)	28	71	1	22	5	0	2	17	0	6	4
17 - 18 (734)	23	76	1	14	7	0	2	10	0	9	4
19 - 20 (721)	27	71	2	13	11	1	3	12	1	10	4
21 - 22 (468)	35	64	2	17	13	1	3	15	1	13	6
23 - 24 (303)	37	62	3	17	14	2	4	19	1	13	3
25 - 26 (141)	32	67	1	16	11	2	3	11	2	10	9
27 - 28 (85)	40	60	0	18	14	4	5	11	4	18	7
29 - 30 (61)	34	61	5	21	7	2	5	12	0	13	10
31 + (166)	40	58	2	24	11	1	4	12	2	13	11
Unknown (79)	28	63	9	15	9	1	3	17	1	5	5
Race											
White (2350)	32	67	2	18	10	1	3	15	1	11	5
Black (623)	22	77	1	10	9	1	2	7	2	8	4
Spanish-speaking (73)	33	67	0	19	10	1	3	8	0	19	6
Unknown (16)	25	50	25	6	19	0	0	6	6	6	6
Occupation											
Student (828)	27	72	1	17	8	1	1	15	1	8	3
Criminal (23)	78	17	4	30	13	9	26	9	9	40	22
Blue Collar (856)	30	69	1	16	11	1	3	12	1	12	5
White Collar (461)	39	60	1	21	12	2	4	18	1	12	8
Military (69)	16	83	1	1	13	0	1	6	0	9	1
Unemployed (349)	26	72	2	12	12	1	2	12	1	8	4
Unknown (485)	28	69	3	17	7	0	4	11	0	11	6
Mobility											
Transient (331)	21	78	2	10	7	1	2	11	0	7	3
Semi-Perm. (125)	30	69	2	10	18	2	0	15	0	14	1
Perman. (2377)	33	66	2	19	10	1	3	14	1	11	5
Suburban (127)	6	94	0	1	5	0	1	4	1	1	1
Unknown (111)	26	69	5	13	12	0	2	13	1	9	4
Prior Contact											
No Record (2621)	28%	70%	2%	16%	10%	1%	2%	13%	1%	10%	4%
Marih. Only (152)	38	61	2	18	15	1	4	16	1	15	7
Other, With/0											
M (187)	32	67	1	16	10	2	5	10	2	11	9
Marih. Other (55)	47	49	4	28	11	6	4	13	2	24	9
Prior Unknown (56)	55	43	2	29	9	7	11	16	0	29	11

The data in Table 13 indicate that in 3% of the cases, a seizure was made incident to arrests which had been preceded by undercover purchases. In cases where marihuana had been bought, the seizure accompanying arrest was more likely to involve over an ounce (26%) than when no buy preceded the arrest (14%) and was less likely to involve less than an ounce (23%) than when only a seizure preceded arrest (69%). Put another way, less than an ounce of marihuana was involved in 83% of the cases in which the only documented marihuana-related activity was a seizure.²⁰

²⁰ This is based on the cases in which the amount of the seizure was recorded. The authors strongly suspect that the cases in which the amount was unrecorded involved lesser rather than greater amounts.

The data in the first panel of Table 14 confirm the relationship between seizures of over an ounce and scope of prior police investigative activity. About three-fourths of the cases involving a seizure of five grams or less were spontaneous arrests. Seven of ten of the cases involving a seizure of 5 to 30 grams were spontaneous arrests. On the other hand, half of the cases involving a seizure of more than one ounce were preceded by a drug investigation. The data also suggest a similar pattern regarding intensity of investigative activity. Twenty-one percent of the cases involving a seizure of more than one ounce were preceded by intermediate or long-term investigations. This compares with the 10% of cases involving a seizure of 6 to 30 grams and 4% of those involving a seizure of five grams or less.

**Table 11 Incidence and Amount of Buys
Among All Marihuana Arrestees**

Number of People	<u>Total</u> 3071	<u>Adults</u> 2491	<u>Juveniles</u> 580
<u>Buys Prior to Arrest</u>			
Buy(s) Made	6%	6%	3%
Marihuana Only	5	5	3
Marihuana and Other Drugs	1	*	*
Other Drugs; Not Marihuana	1	*	*
No Buys Made	25	25	25
Inapplicable	69	69	71
<u>Amount of Marihuana Buys</u>			
No Buys of Marihuana	95%	95%	97%
Marihuana Bought	5	5	3
Less than 5 grams	1	1	*
5-30 grams	2	2	1
30-240 grams	1	1	*
over 240 grams	1	1	*
amount unknown	*	0	0

***Indicates less than one percent**

The data in the second panel of Table 14 describe this relationship between amount seized and intensity of investigation in another way. Seven percent of the intermediate and long-term investigations culminated in seizures of five grams or less, as compared with 16% of the short-term investigations and about one-fourth of the spontaneous arrests. Conversely, more than one ounce was seized in connection with 47% of the long-term investigations, 28% of the intermediate investigations and 22% of the short-term investigations culminated in seizures of more than one ounce, as compared with 11% of the spontaneous arrests.

In summary, more than two-thirds (69%) of the arrestees in the study population were arrested spontaneously without any prior investigative activity. Spontaneous arrests were particularly common when the arrestee was male, under 20, black, a student or blue collar worker, a resident of a sub-

urban area and without prior criminal involvement. Spontaneous arrests were more common in Cook County, Washington, D.C. and Chicago than in other jurisdictions.

When prior investigations occurred, they were usually short-term and were generally directed toward marihuana rather than other drugs. In 11% of all cases, the arrest was preceded by active police involvement in seeking out the arrestee. In 54% of these cases (6% of all cases), the arrestee was the subject of police-supervised drug "buys," primarily of marihuana only.

The marihuana arrest was almost always precipitated solely by seizure of less than an ounce of the drug from the possession or presence of the arrestee. In a small number of the cases (3%) the marihuana arrest was based solely on undercover drug purchases from the arrestee. Most such purchases involved less than an ounce of marihuana.

Table 12 Incidence and Amount of Seizures Among All Arrestees

Number of People	Total 3071	Adult 2491	Juveniles 580
<u>Seizures Prior to Arrest</u>			
No Seizures Made	6%	5%*	8%
Buys Made	3		
No Buys Made	3		
Seizures Made	94	95	92
Less than one gram	18	17	21
1-5 grams	23	24	21
6-30 grams	26	25	29
over 30 grams	15	16	10
amount unknown	13	13	11

* Numbers are too small to warrant separate analysis of no-seizure cases for adults and juveniles

Table 13 Type of Drug Buy and Amount of Marihuana Seized

	Type of Buy					Total
	No Buys	Marihuana Only	Marihuana and other	Other No Marihuana	Drug Type Unknown	
Total 3071	(2,887) 94%	(138) 5%	(22) 1%	(20) 1%	(4) *	
Amount of Marihuana Seized						
None	3	46	59	5	25	6
< 1 gram	19	2	5	10	0	18
1-5 grams	24	7	5	3	0	23
6-30 grams	26	15	18	50	0	26
31+ grams	15	26	14	0	75	15
unknown amount	13	4	0	10	0	13

* Indicates less than one percent

Table 14 Amount of Marihuana Seized
and Prior Investigations

	Investigation			Scope			Object			
	Yes	No	Uk	Short	Inter	Long	Uk	M	Other	All
Total (3071)	30%	69%	2%	16%	10%	1%	3%	13%	1%	11%
Marihuana Seized										
None (174)**	60	33	6	11	41	5	4	32	1	18
< 1 gram (546)	22	76	2	15	4	*	3	10	*	6
1-5 grams (717)	18	81	1	11	4	*	3	5	1	8
6-30 grams (784)	31	68	1	20	9	1	1	12	1	14
31+ (462)	50	49	2	24	18	3	5	28	*	14
Unknown Amount (388)	21	78	1	13	7	0	1	9	2	8

Amount of Marihuana Seized

	Less than one gram			1-5 grams		6-30 grams		31+ grams		amount
	None	174	(6%)**	546	(18%)	717	(23%)	784	(26%)	unknown
Total (3071)								462	(15%)	388
										(13%)

Prior Investigation

No Investigation (2157)	3%	20%	27%	25%	11%	14%
Short-term (550)	4	16	16	32	22	10
Intermediate (301)	24	7	9	24	28	9
Long-term (30)	27	7	7	13	47	0
Unknown (83)	8	22	28	11	27	5

* Indicates less than one percent

** It should be noted that half of the arrests in which no marihuana was seized were preceded by a "buy"

Another 3% of the arrests involved both buys and seizures, and a final 3% involved neither a buy nor a seizure.

A cumulative review of the statistics now presented suggests that substantial proportions of marihuana arrests are a consequence of fortuitous contacts with law enforcement officers. A considerable number of these arrests were made without investigatory activity by the police and involve small amounts of marihuana and large numbers of persons with no prior criminal involvement and no present indication of major involvement with drugs. All of this is particularly true when young persons, 20 and under, are arrested.

CIRCUMSTANCES OF ARREST

This study anticipated that identification of both the arresting jurisdictions and physical locations of these arrests might provide a description of the general allocation of responsibility for the detection and arrest of marihuana offenses. Data were generally available pertaining to the number of arresting officers, the jurisdictional responsibility (local, state, federal, or officers with limited jurisdiction) and the specific arresting officer or agency within each of these.

Arresting Jurisdiction. The data in Table 15 indicate that about 97% of all arrests were made by local police, the general patrolman making more than half (59%) of all arrests. Narcotics or vice squad officers were involved in less than a fourth (23%) of all marihuana arrests. Comparatively few of these arrests were made by state police (3%), federal agencies (2%) or officers with limited jurisdiction such as park police (7%),³⁰ university police (0) or private security (less than 1%). With regard to adult-juvenile differences, Table 15 indicates that proportionately more juvenile arrests (65%) were made by general patrolmen than adult arrests (57%). Narcotics or vice squads were twice as likely to be involved in arrests of adults (26%) than juveniles (12%). A second officer was considerably more likely to be present at adult arrests (53%) than at juvenile arrests (38%).

Jurisdictions are generally uniform in the preponderance of arrests at the municipal and county level, except in Washington, D.C., where 37% of all arrests were made by park police. General patrolmen made the majority of arrests in Cook County (74%), Chicago (72%), San Mateo (72%), Tucson (68%) and Dallas (66%). Narcotics or vice squad officers (overall, 23%) were

more active in Omaha (56%) and Virginia (47%) and less active in Cook County (10%), Chicago (10%), and San Mateo (13%). General detectives (overall, 4%) were more active in Maryland (17%) than in other jurisdictions. Second officers, present at about half of all arrests, were more often present at arrests in Chicago (83%) and Dallas (80%) and less often present in Virginia (15%), Maryland (17%), and Washington, D.C. (23%).

Physical Location. Over two-thirds (68%) of the marihuana arrests occurred in public: in vehicles, on the street, in parks or in indoor public areas such as department stores, theaters, airplane and bus terminals. The data in Table 16 indicate that juveniles were more likely to be arrested in outdoor areas (41%) than were adults (26%). Proportionately more adult arrests occurred in vehicles (40%) than did juvenile arrests (34%); adults were more often arrested indoors (33%) than were juveniles (23%).

Jurisdictions differ regarding the physical location of marihuana arrests. Vehicle arrests (overall, 39%) were more common in Cook County (57%)³¹ and less common in Washington, D.C. (19%). Indoor arrests (overall, 31%) were more common in Omaha (46%), Dallas (42%) and Virginia (41%), and less common in Washington, D.C. (17%) and Cook County (20%). Outdoor arrests (overall, 29%) were much more common in Washington, D.C. (65%),³² and much less common in Dallas (14%).³³

Detailed data pertaining to the various arrest locations are summarized in Tables 17, 18 and 19. The data in Table 17 indicate that of all indoor arrests, a considerable number (80%) took place in a private single family residence. The data also indicate that arrest warrants were used in 17% of all indoor arrests. Most of these warrants described a prior drug offense, rather than the offense for which the arrest was made. Arrest warrants were more often used in indoor adult arrests (19%) than for indoor juvenile arrests (6%). Thus, 93% of all indoor juvenile arrests and 79% of all indoor adult arrests did not involve an arrest warrant. The cause of police presence at these indoor locations was frequently a prior short-term investigation of a drug complaint (41% overall, 38% of adult and 58% of juvenile arrests). An unrelated complaint was the cause of police presence in 25% of all these arrests. For example, investigation of

³¹ In Cook County, 52% of juveniles and 58% of adults were arrested in vehicles.

³² In Washington, D.C., 94% of juvenile arrests and 74% of adult arrests occurred outdoors.

³³ In Dallas, 16% of juvenile arrests and 13% of adult arrests were outdoors (the corresponding overall statistics are 41% juvenile and 26% adult).

³⁰ "Park police" in this study are unique to Washington, D.C., which contains significant public park areas.

Table 15 Arresting Jurisdiction and Officer

Number of People	<u>Total</u> 3071	<u>Adults</u> 2491	<u>Juveniles</u> 580
<u>Local Police</u>			
First Officer			
Narcotics	23%	26%	12%
General Patrol	59	57	65
General Detective	4	4	8
Juvenile Officer	*	0	2
Unknown	1	1	1
Local-Unknown	4	5	2
No Local Officer	8	7	10
Second Officer			
Narcotics	12	14	6
General Patrol	32	34	26
General Detective	2	2	4
Juvenile Officer	0	*	1
Unknown	1	1	1
Local-Unknown	2	2	1
No Local/2nd Officer	50	47	62
<u>State Police</u>			
Highway Patrol	*	*	*
Investigative Unit	1	1	0
State-Unknown	1	0	0
No State Officer	97	97	98
<u>Federal Agencies</u>			
BNDD	*	*	0
Customs	*	*	0
INS	0	0	0
Federal-Unknown	*	*	0
No Federal Officer	98	98	99
<u>Other Agencies</u>			
Park Police	7	6	10
University Police	0	0	0
Private Security	*	*	0
No "Other" Officer	91	92	89

* Indicates less than one percent

"loud parties" was the cause of police presence in 6% of all indoor arrests. Arrests arising from investigation of unrelated complaints are the functional equivalent of spontaneous arrests in that the initial contact is generally unrelated to marihuana.

Table 18 presents detailed information concerning outdoor arrests. The data indicate that a substantial number of all outdoor arrests (91%) were based on "simultaneous" offenses committed at the time of, rather than prior to, arrest. Most of the simultaneous offenses involved drug offenses,

**Table 16 Physical Location of
Marihuana Arrests**

Number of People	Total 3071	Adults 2491	Juveniles 580
Vehicle Arrests	39%	40%	34%
Arrest Indoors	31	33	23
Arrest Outdoors	29	26	41
Self Surrender	1	0	2
Unknown	1	1	1

usually marihuana possession. Six percent of all outdoor arrests were based on prior offenses, either drug (4%) or nondrug (2%). Adults and juveniles arrested outdoors do not differ substantially in what was specified as the basis for arrest.

Among persons arrested outdoors who were searched, the most common reasons for search were "suspicious behavior" (34%) and visibility of marihuana (24%). Adult-juvenile differences are generally small, although "suspected loitering" is more often the specified reason for a juvenile search (17%) than for an adult search (6%). Juveniles are stopped and searched because of "suspicious behavior" (40%) more often than are adults (31%). Arrestees were searched incidental to an arrest warrant in less than 1% of all outdoor arrests.

The data in Table 19 show the indicated causes for vehicle stops and arrests. The cause most commonly indicated for vehicle stops was "suspicious circumstances" (28%), and this was more often designated in juvenile stops (37%) than in adult stops (26%). Suspected driving violations such as faulty lights, reckless driving, speeding, running a red light, incorrect turns, faulty inspection stickers, illegal lane changes, collectively, were the designated causes for vehicle stops in 29% of the arrests and were more common in adult arrests (33%) than in juvenile arrests (21%).

The most commonly indicated causes for arrest after the vehicle was stopped were visibility of marihuana (39%), "furtive gestures" (27%) and the officer smelling marihuana (12%). Table 19 indicates that search warrants were utilized in less than 1% of vehicle arrests. Arrest warrants were used in 1% of these arrests.

Group Arrests. This study attempted to identify, in the case of each arrest, the total number of

persons arrested simultaneously for a marihuana, or marihuana-related offense. Of the more than 3,000 arrestees in the present study, 29% were arrested alone, 24% were arrested with another person, 26% were arrested in a group of three or four persons and 18% were arrested in a group of five or more persons.²⁴

The data in panel one of Table 20 indicate that the distribution of group arrests is associated with arrest location. Two to four persons were arrested in about two-thirds (65%) of all vehicle arrests, in about half of the indoor arrests (54%), and in less than half of outdoor arrests (41%).

The second panel of Table 20 summarizes these patterns differently. One person arrests, for example, more often occurred outdoors (39%) than indoors (29%) or in vehicles (29%). Three-person and four-person arrests, however, were about twice as likely to occur in vehicles (48% and 57%) as indoors (27% and 21%) or outdoors (24% and 22%). But almost half of all simultaneous arrests of five or more persons occurred indoors (47%). Twenty-five percent of five or more person arrests occurred in vehicles and 29% were outdoor arrests.

Regarding the relationships between five person or more arrests and indoor location, the data (not shown) indicate that 30% of all single family-private residence arrests involved five or more persons. Of outdoor-public area arrests, 28% involved five or more persons, and of all street arrests and vehicle arrests, 12%, in each case, involved five or more persons.

²⁴ One and two person arrests were somewhat more common among adults than juveniles, although three and four-person arrests were equally common in each group (27%). Five or more person arrests were somewhat more common among juveniles (26%) than adults (19%).

Table 17 Characteristics of Indoor Marihuana Arrests

	<u>Total</u>	<u>Adults</u>	<u>Juveniles</u>
<u>Arrest Indoors</u>			
Number of People	957	821	136
<u>Physical Location</u>			
Single Family Priv. Res.	80%	81%	74%
Multiple Private Res.	3	4	0
Other Building - Drug Related Invest.	10	8	18
Other Building - Non-Drug Related Invest.	6	6	7
Indoors, Description Unknown	2	2	2
<u>Arrest Warrant</u>			
Yes - Described Prior Drug Offense	8	9	3
Yes - Described Prior Non-Drug Offense	2	2	1
Yes - Described Present Offense	5	6	1
Yes - Description Unknown	2	2	1
Arrest Warrant Not Utilized	81	79	93
Unknown	2	2	2
<u>Cause of Police Presence</u>			
Prior Long-Term Drug Investigation	3	3	1
Prior Interned. Drug Investigation	22	24	15
Prior Short-Term Investigation of Drug Complaint	41	38	58
Drug Investigation of Unknown Duration	4	5	2
Unrelated Complaints -	25	26	23
Altercations	1	1	1
Loud Parties	6	6	7
Suspected Burglary	4	5	1
Suspected Trespass	1	1	2
Not Specified	13	13	12
Unknown Cause of Police Presence	4	4	2

To summarize, one-person arrests are associated with some public locations—particularly the street and indoor public areas—but not with outdoor public areas. Arrests of two to four persons are associated with vehicle arrests, and arrests of five or more persons are associated with indoor locations.

Warrants. Generally, a person may be arrested without a warrant for a misdemeanor only if the offense is being committed in the presence of the officer, and for a felony only if the officer has "probable cause" to believe a felony has been or is being committed. The absence of an arrest warrant is probably not significant in marihuana

**Table 18 Characteristics of Outdoor
Marihuana Arrests**

	<u>Total</u>	<u>Adults</u>	<u>Juveniles</u>
<u>Outdoor Arrests</u>			
Number of People	878	643	235
<u>Basis For Arrest</u>			
Prior Offense - Drug	4%	5%	1%
Prior Offense - Non-Drug	2	2	3
Simult. Offense - Drug	58	58	58
Simult. Offense - Non-Drug	33	32	34
Both	2	2	1
Unknown	2	2	3
Officer Had Arrest Warrant Specifying Prior Offense	4	5	2
<u>Reason For Search **</u>			
Suspicious Behavior	34	31	40
Officer Saw Marihuana	24	24	24
Officer Smelled Marihuana	9	8	12
Suspected Loitering	9	6	17
Drug Paraphernalia Seen	8	8	9
Suspected Theft	3	3	2
Marihuana Bought	2	3	*
Suspected Curfew Viol.	1	1	0
Suspected Vagrancy	1	0	1
Incident to Arr. Warr.	*	*	0
Prior Information	1	1	1
Reason Unknown	1	2	0
Other Reason	30	30	30

* Indicates less than one percent

**More than one reason was sometimes recorded

cases. The presence or absence of a search warrant is significant in light of the formal warrant requirements for the execution of a search. This is especially true with regard to indoor arrests.

The data in Table 21 indicate that 44% of all indoor arrests involved the use of a search warrant alone. An arrest warrant alone was used in 11% of the arrests, and both search and arrest warrants were used in 7% of indoor arrests. No warrant was used in 37% of all indoor arrests.

Table 21 also shows substantial adult-juvenile differences in regard to warrants. Juvenile indoor

arrests were considerably less likely to involve warrants than adult indoor arrests. Search warrants were used half as often among juveniles (28%) as adults (54%).

The data in Table 22 indicate that the use of warrants in indoor arrests is associated with certain demographic characteristics of the arrestee. Although search warrants were used equally often for males and females (50%), their use varied directly with the age of the arrestee. Search warrants were least often used in connection with indoor arrests of persons 16 and under (28%). The fre-

**Table 19 Characteristics of Vehicle
Marihuana Arrests**

	<u>Total</u>	<u>Adults</u>	<u>Juveniles</u>
<u>Vehicle Arrests</u>			
Number of People	1185	990	195
<u>Cause For Vehicle Stop</u>			
Suspicious Circumstances	28%	26%	37%
Faulty Lights	7	8	6
Reckless Driving	6	7	4
Speeding	6	7	5
Running Red Light	4	4	4
Routine Traffic Stop	4	3	6
Incorrect Turn	4	4	1
Stopped Vehicle	3	2	4
Arrest Warrant	1	1	1
Faulty Inspection Sticker	1	1	1
Illegal Lane Change	1	2	0
Search Warrant	*	*	0
Other Reason	41	42	36
<u>Cause For Arrest</u>			
Officer Saw Marihuana	39	38	39
Furtive Gesture	27	27	27
Officer Smelled Marihuana	12	11	16
Incidental Search	9	9	6
Officer Saw Drug Paraphernalia	7	8	5
Subject Appeared Intoxicated	5	5	3
Suspicious Container Seen	1	1	1
Arrest Warrant	1	1	1
Search Warrant	*	*	0
Other	21	21	21

* Indicates less than one percent

quency with which such warrants were used increases for 17-18 year olds (37%), 19-20 year olds (46%), 21-22 year olds (53%), 23-24 year olds (64%), 25-26 year olds (69%) and 27-28 year olds (71%), and then peaks for 29-30 year olds (79%), before dropping somewhat in connection with those over 30 (60%).

The incidence of search warrants in indoor arrests of blacks and whites is identical (44%), but is considerably less among Mexican-Americans (18%). Over half of arrests of unemployed per-

sons (55%) and white collar workers (51%), and less than half of blue collar arrests (44%), involved search warrants. Student arrests, however, were less likely to involve a search warrant (28%).

The data indicate that search warrants were more often used in indoor arrests of suburban (50%) and permanent (46%) persons than in the cases of transient (34%) or semipermanent persons (20%). Search warrants were no more often used for arrestees with a prior drug arrest record than persons with no prior drug arrest record. The

Table 20 Number of Persons Arrested
and Physical Location of Arrest

	(Partial Table) <u>Number of Persons Arrested</u>					UK
	1	2	3	4	5+	
Total (3071)	29%	24%	14%	12%	18%	3%
Indoor Arrests (957)	30	25	15	14	14	2
Outdoor (878)	39	20	12	9	18	2
Vehicle (1185)	22	29	18	18	12	2

	<u>Number of Persons and Location</u> (Partial Table) <u>Location</u>		
	<u>Indoor</u>	<u>Outdoor</u>	<u>Vehicle</u>
One Person Arrest (883)	29%	39%	29%
Two Persons Arrested (730)	28	24	48
Three Persons Arrested (441)	27	24	48
Four Persons Arrested (374)	21	22	57
Five or More Arrested (559)	47	29	25

Table 21 Use of Warrants During Indoor Arrests

Number of People	<u>Total</u> 957	<u>Adults</u> 821	<u>Juveniles</u> 136
No Warrant	37%	34%	66%
Unknown	2	1	1
Arrest Warrant Only	11	11	5
Search Warrant Only	44	46	28
Both Arrest and Search	7	8	0

**Table 22 Use of Warrants During Indoor Arrests
and Demographic Characteristics**

	No Warrant/ Unknown	Arrest Warrant	Search Warrant	Arrest And Search War.
Total (957)	(374) 39%	(101) 11%	(418) 44%	(64) 7%
<hr/>				
<u>Gender</u>				
Male (733)	37%	12%	43%	7%
Female (222)	46	5	45	5
<u>Age</u>				
16 and Under (75)	68	4	28	0
17 - 18 (185)	52	11	32	5
19 - 20 (213)	40	14	40	6
21 - 22 (164)	37	10	43	10
23 - 24 (117)	27	9	54	10
25 - 26 (51)	24	8	61	8
27 - 28 (41)	20	10	59	12
29 - 30 (24)	13	8	79	0
Over 31	30	10	54	6
Age Unknown (18)	33	22	44	0
<u>Race</u>				
White (770)	38	11	44	7
Black (158)	42	8	44	6
Spanish-speaking (22)	68	9	18	5
Unknown (4)	0	25	50	25
<u>Occupation</u>				
Student (209)	59	8	28	5
Criminal (19)	32	11	58	0
Blue Collar (262)	39	10	44	7
White Collar (200)	31	10	51	8
Military (12)	25	58	17	0
Unemployed (112)	31	5	55	9
Unknown (143)	29	15	49	7
<u>Mobility</u>				
Transient (80)	56	8	34	3
Semi-Permanent (35)	43	17	20	20
Permanent (807)	37	10	46	6
Suburban (4)	0	25	50	25
Unknown (31)	39	13	29	19
<u>Prior Drug Contact</u>				
No Prior Drug Arrest (788)	41	10	42	7
Marihuana Only (52)	31	23	44	2
Other - Not Marihuana (65)	37	9	49	5
Marihuana and Other (23)	13	4	65	17
Unknown Type (29)	21	24	48	7

data do suggest, however, that the probability of a search warrant may increase as the seriousness of prior criminal involvement increases.

The amount of marihuana seized is associated with certain circumstances of the arrest. It was noted earlier that seizures of less than one ounce are strongly associated with spontaneous arrests while seizures of more than one ounce are strongly associated with intensive police involvement (intermediate and long-term investigation). The data in Table 23 confirm this finding, indicating that seizure of less than one ounce of marihuana is associated with those circumstances of arrest which are in turn related to spontaneous arrests.

For example, the amount of marihuana seized also varies according to the jurisdiction of the arresting officer. Arrests by narcotics officers more often involved amounts over one ounce (29%) than did arrests made by general detectives (16%) or general patrolmen (11%). Conversely, arrests by general patrolmen more often involved seizures of five grams or less (48%) than did arrests by general detectives (18%) or narcotics officers (25%).

In addition, in regard to arrest location, proportionately more indoor arrests involve seizures of more than thirty grams (24%) than do vehicle (11%) or outdoor (11%) arrests.

Number of persons arrested is weakly associated with the amount of marihuana seizures. Arrests of five or more persons are more likely than one person arrests to involve seizures of more than five grams (34% to 20%) or of more than one ounce (19% to 12%) and are less likely than one-person arrests to involve seizures of less than one gram (21% to 10%).

To summarize, data pertaining to the arrest indicate that nearly all marihuana arrests (over 97%) were made by local officers. Over two-thirds (68%) occur outdoors or in vehicles. Of all indoor arrests, 80% occurred in single family private dwellings. Nearly all (91%) of the outdoor arrests were based on "simultaneous" offenses, where no investigative activity preceded the arrest. The most common reason reported for outdoor searches was "suspicious behavior" and the most common reason reported for vehicle stops was "suspicious circumstances."

Sixty-eight percent of all marihuana arrests involve two or more persons. About one in five arrestees was arrested in a group of five or more persons.

The majority of marihuana arrests do not involve the use of arrest or search warrants. Even among indoor arrests, over a third were accom-

plished without search warrants, and the younger the arrestee, the less likely the police were to have secured a warrant.

Seizure of more than one ounce of marihuana is associated with prior investigative activity. About three of every 10 arrests made by narcotics officers involve a seizure of more than one ounce, and about one of every 10 arrests made by general patrolmen involve seizures of more than one ounce.

Post-Arrest Disposition

Contemporary discussion of appropriate marihuana control policy has focused on current criminal procedures for processing marihuana defendants. In the absence of systematic documentation, many observers have surmised that substantial numbers of marihuana cases are dismissed, with another large number of defendants pleading guilty, and a comparatively small number of cases coming to trial. In addition, some have speculated that various extra-legal considerations affect this process, that the probability of dismissal and prosecution bears unevenly on persons arrested for similar offenses. This research has attempted to examine disposition patterns in a manner which would be responsive to these hypotheses.

Examination of how the criminal justice system deals with individual cases, marihuana arrestees and others, is complicated by various properties of that system. First, the system of criminal justice is not a completely uniform institution. It was not designed at one particular time. Criminal process is guided partly by formal procedures and rules, and partly by individual judgment and discretion. Second, the criminal process, the procedures of apprehending, prosecuting, convicting and sentencing, varies across jurisdictions. Each county, city and state has its own criminal justice system, with its own idiosyncracies and features. Variations and idiosyncracies are sometimes specific to certain police, prosecutorial and judicial agencies. Third, the criminal justice system is not an independent event, isolated in time. The system is, rather, a continuum, a series of events which progress in a reasonably orderly fashion. These events, designated as phases in this research, differ among themselves in their visibility and in the extent to which they are controlled by the various agencies: the police, the prosecutor's office and the courts.

Differences in visibility and the uneven mix of formal procedure and individual judgment in the

**Table 23 Amount of Marihuana Seized and
Circumstances of Arrest**

	None	Less Than 1 Gram	1 - 5 Grams	6 - 30 Grams	31 + Grams	Amount Unknown
Total (3071)	(174) 6% *	(546) 18%	(717) 23%	(784) 26%	(462) 15%	(388) 13%
<u>Arresting Jurisdictions</u>						
Local Police						
Narcotics (719)	9	10	15	28	29	8
Gen. Patrol (1802)	2	22	26	26	11	12
Gen. Detec. (134)	9	10	8	19	16	39
Juvenile Officer (15)	54	23	0	0	8	15
Local Police-UK (129)	15	19	29	12	9	17
State Police						
Highway Patrol (4)	0	0	0	50	50	0
Gen. Invest. Unit (34)	35	12	12	12	21	9
Federal Agencies						
BNDD (5)	40	0	0	0	60	0
Customs (8)	0	13	0	0	63	25
Other Agencies						
Park Police (203)	5	8	37	28	4	17
Private Security (12)	0	33	50	17	0	0
Other Unknown (6)	0	17	33	0	50	0
<u>Arrest Jurisdiction</u>						
Unknown (40)	10	25	15	33	5	13
<u>Location of Arrest</u>						
Arrest Indoor (957)	7	14	17	28	24	10
Motor Vehicle (1185)	3	21	26	25	11	14
Arrest Outdoor (878)	6	17	28	24	11	14
Other (24)	50	8	4	17	17	4
Location Unknown (27)	59	7	7	19	0	7
<u>Size of Group Arrested</u>						
One (883)	10	21	26	20	12	12
Two (730)	4	21	27	23	16	10
Three (441)	4	17	22	29	16	12
Four (374)	4	16	22	29	13	16
Five or More (557)	2	10	18	34	19	17
Unknown (84)	20	19	10	23	19	10

* It should be noted that half of the arrests in which no marihuana was seized were preceded by a "buy"

decision making process pose difficult problems for research in this area.³⁵

The research reported here attempted to meet these problems and minimize the inherent difficulties by conceptualizing the criminal process as a series of interlocking phases. For the adult system, seven such phases were identified:

(1) The arrest phase covering the apprehension of the arrestee who is then released or taken into custody by the police whereupon initial charges are logged by the arresting officer;

(2) The charge phase, covering the decision by the police department whether or not to file charges and the processing of the case until presentation to the district attorney;

(3) The complaint phase, covering the determination by the district attorney whether the case should proceed in the system or be dismissed;

(4) The initial judicial phase, covering the pretrial proceedings undertaken within 96 hours after arrest;

(5) The subsequent pretrial proceedings phase, covering other proceedings undertaken prior to the trial, including the process of plea-bargaining;

(6) The trial phase, covering the motions, evidentiary hearing and the verdict; and

(7) The sentencing phase.

For the juvenile system, five phases were identified:

(1) The arrest phase, covering the apprehension of the juvenile by the police (or the filing of a "complaint" by someone outside the criminal justice system), and the initial decision by the police whether to recommend institution of juvenile proceedings;

(2) The petition phase, covering the decision by the juvenile authorities whether or not to institute proceedings by filing a "petition";

³⁵ These characteristics of the criminal process are found at various points from arrest to ultimate disposition. For example, although the arrest phase is thought to be highly visible, the extent to which police officers elect not to make an arrest is outside public view, and although formal procedure requires that each arresting officer log initial charges, the officer may elect to dismiss the arrestee without recording the event at all. If the arrestee is not released at this point, the case moves to the domain of the prosecutor, where formal procedure or individual judgment, or both, may decide whether charges are to be filed or dismissed, or whether the case is to be diverted to another area of the criminal system. If the case is neither dismissed nor diverted, judicial hearings are held with the participation of the police, the prosecutor, defense counsel, defendant and judge. The number of possible discretionary decisions now may multiply, and resulting variations in bail procedures, motions and dismissals may occur. Case outcomes and sentencing procedures again vary with differences in both formal procedure and individual judgment.

(3) The pretrial phase, covering the formal and informal consultations and hearings by the juvenile judge and court officials prior to an evidentiary hearing;

(4) The trial phase, covering the formal evidentiary proceeding and the verdict; and

(5) The sentencing phase.

Findings pertaining to post-arrest dispositions are presented in four subsections. First, an overview of case terminations and dispositions is presented for all arrestees. The nature of dispositions at each phase is described, and adult-juvenile and jurisdictional variations are discussed. Second, each of the presentence phases is described in detail. General patterns and variations in procedure are identified. A third subsection presents findings concerning sentencing and a fourth subsection analyzes amount of time spent in the criminal justice system as a variable in the processing of marijuana defendants.

ULTIMATE DISPOSITION: OVERVIEW

The data in Figure 1 show the disposition of closed cases in the study population. The data indicate that three of every five cases (60%) were terminated prior to trial.

"Termination" is defined as the disposition of a case at some point between apprehension and formal trial with the effect that no further processing is undertaken by participants in the system, including police, prosecutor, judge or probation officials. Of the 2,659 closed cases, 1,589 were terminated, representing 81% of the juveniles and 55% of the adults.

Conversely, 38% of arrestees whose cases were closed were sentenced after pleading guilty or being found guilty at trial. The remaining 2%, all adults, were found not guilty at trial.

The data in Table 24 summarize the disposition of *all* arrestees in the study population. Fifty-two percent of the cases were terminated and a third (33%) were found guilty. Twenty percent pleaded guilty and 13% were found guilty at trial. Ten percent of the defendants reaching trial were found innocent (2% of all cases). At the time of the data collection, 11% of the cases were still pending and the dispositions in 2% of the cases were not recorded.

Terminations occurred more frequently for juveniles (70%) than for adults (48%) and the points of termination varied considerably. Juveniles were about 20 times more likely than adults to have their cases terminated at the arrest phase. A substantial proportion of cases was terminated at the judicial pretrial phases for both adults (28%) and juveniles (48%). More than half of all adult

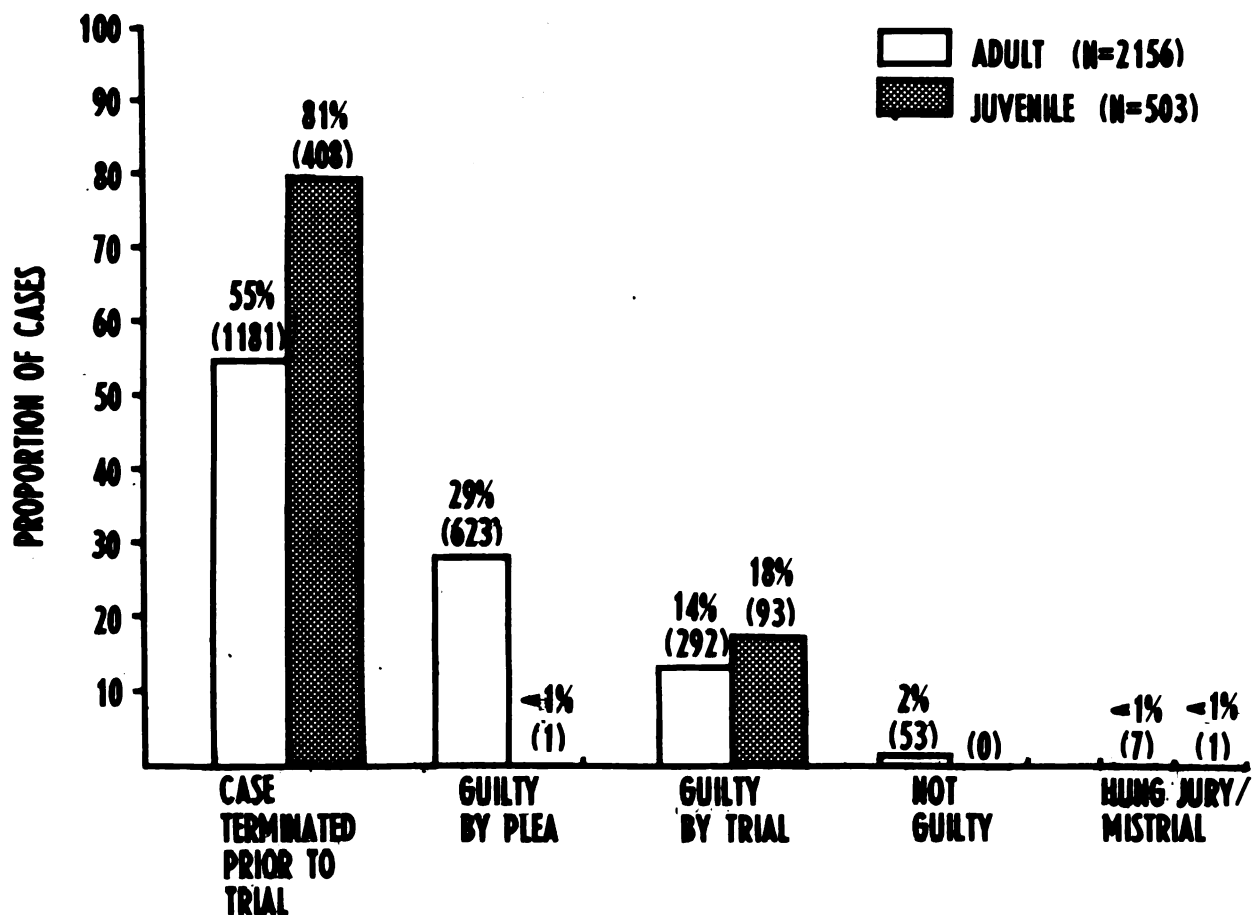


Figure1 DISPOSITIONS OF CLOSED MARIHUANA CASES

terminations occurred during the subsequent pre-trial phase, i.e., subsequent to the initial judicial hearing but prior to trial.

Adults and juveniles also differ in regard to pleas. Although 25% of the adults eventually pleaded guilty only one juvenile reportedly pleaded guilty.³⁶ Equal proportions of adult and juvenile cases went to trial on the facts (15% and 16% respectively). However, 2% of the adults and none of the juveniles were found not guilty at trial. Overall, 37% of the adults and 16% of the juveniles were convicted.

Adult Dispositions. The data in Table 25 indicate that among adults, terminations were more common among females (57%) than males (46%), although there is little difference regarding the phases at which they were terminated. Convictions, resulting either from guilty pleas or from verdicts

of guilty at trial, were more common among males (38%) than among females (29%). Age does not appear to be associated with either the probability of termination or the point of termination, nor does the incidence of guilty pleas or guilty verdicts vary with age.

In regard to race, terminations were somewhat more common among blacks (51%) than among whites (45%) or Mexican-Americans (44%). Determination of guilt was more common among white (40%) than black or Mexican-American (30% and 29%) defendants. Similar proportions of these groups, however, were found innocent. Occupational groups do not differ greatly in regard to termination, guilty pleas or trial verdicts. Residence, however, is associated with variations in disposition. Terminations were more common among suburban residents (81%) than among other defendants (overall, 48%), and suburban residents were less often found guilty (9%) than others (overall, 37%). Terminations were less common

³⁶ This is not surprising, given the informal, generally more intimate nature of juvenile proceedings.

**Table 24. Proportion of Defendants Terminated
in Each Disposition Phase**

Number of People	<u>Total</u> 3071	<u>Adults</u> 2491	<u>Juveniles</u> 580
<u>Cases Terminated At-</u>			
Arrest Phase	5%	1%	21%
Charge Phase	8	9	0
Complaint Phase	5	7	*
Pretrial Phase			
Initial Formal Judicial	3	3	*
Subsequent Pretrial	20	25	0
Juvenile Pretrial	9	-	48
Trial Phase	2	3	1
<u>Other Dispositions</u>			
Guilty By Plea	20	25	*
Guilty By Trial	13	12	16
Not Guilty	2	2	0
Other Trial Disposition	*	*	*
Pending	11	11	13
Unknown	2	3	1

* Indicates less than one percent

among transients (39%) than others (overall, 48%). Guilty pleas were made more often by transients (36%) than permanent or semi-permanent residents (25%) or suburban residents (8%). Guilty verdicts were more common among semi-permanent defendants (21%) than permanent (12%) or transient (8%) or suburban (1%) defendants.

Prior investigation is associated with termination but not with other dispositions. Terminations were more common among arrestees who had not

been investigated (51%) than those whose arrests had been preceded by short-term or intermediate investigations (37%) or long-term investigations (30%). (It should be noted, however, that even among investigated arrestees, one case in three was terminated.) Ultimate determination of guilt also varied according to intensity of investigation. Thirty-four percent of those arrested without prior investigations pleaded guilty (22%) or were found guilty (12%). Persons arrested after a short-term or intermediate investigation were

Table 25 Proportion of Adult Defendants Terminated at Six Phases of Disposition and Demographic Characteristics

Number of People (2491)	Cases Terminated At-							Other Dispositions						
	Arrest Phase	Charge Phase	Complaint Phase	Initial Formal Judicial	Subsequent Pretrial	Trial		Guilty By Plea	Guilty By Trial	Not Guilty	Other Trial Disposition	Pending	Unknown	
	1%	9%	7%	3%	25%	3%		25%	12%	2%	*	11%	3%	
Gender														
Male (2186)	1%	9%	6%	3%	24%	3%		26%	12%	2%	*	11%	3%	
Female (302)	3	10	10	3	30	1		21	8	3	*	10	3	
Unknown (3)	0	33	0	0	33	0		0	0	0	0	33	0	
Age														
16 & Under (5)	20	20	0	0	0	0		40	0	0	0	20	0	
17 - 18 (495)	2	13	4	3	24	3		22	14	2	*	11	2	
19 - 20 (710)	2	10	7	5	24	2		25	12	3	*	9	2	
21 - 22 (467)	*	8	6	3	28	2		28	11	2	1	10	3	
23 - 24 (302)	0	10	7	3	22	3		30	12	2	0	10	3	
25 - 26 (141)	1	5	11	1	27	4		26	9	3	0	9	5	
27 - 28 (85)	1	5	13	2	29	6		20	6	1	0	13	4	
29 - 30 (61)	0	8	3	2	25	3		25	7	0	0	28	0	
31 +	0	8	6	1	23	2		27	8	2	1	18	4	
Unknown	0	7	7	5	29	0		15	24	2	0	10	2	
Race														
White (1830)	1	9	7	3	23	2		27	13	2	*	10	3	
Black (580)	*	9	6	3	30	3		22	8	2	*	14	2	
Span.-Speak. (59)	0	14	3	5	22	0		19	10	3	0	22	2	
Am. Ind. (4)	0	25	25	25	25	0		0	0	0	0	0	0	
Other (4)	25	0	25	0	25	0		0	25	0	0	0	0	
Unknown (14)	0	7	7	7	14	7		14	36	0	0	0	7	
Occupation														
Student (376)	1	10	4	4	27	2		23	16	2	0	11	2	
Criminal (23)	0	13	0	0	9	0		30	13	0	0	35	0	
Blue Collar (832)	1	9	4	4	26	3		27	11	3	1	10	2	
White Collar (450)	1	7	7	4	25	3		27	10	2	*	11	4	
Military (69)	1	4	17	3	26	0		30	16	0	0	1	0	
Unemployed (317)	1	7	6	3	26	3		26	10	3	0	13	5	
Unknown (424)	2	14	12	3	22	2		18	11	1	1	13	2	
Mobility														
Transient (298)	*	8	10	2	18	1		36	8	2	0	10	3	
Semi-Perm. (124)	1	3	15	6	20	3		25	21	2	0	5	0	
Permanent (1864)	1	10	4	3	25	3		25	12	2	*	12	3	
Suburban (99)	1	9	30	6	34	1		8	1	0	0	5	4	
Unknown (106)	5	9	6	2	32	5		15	10	1	1	13	1	
Prior Drug Invest.														
No Invest. (1732)	1%	10%	8%	3%	27%	2%		22%	12%	2%	*	9%	3%	
Short-Term (377)	1	6	3	2	23	2		32	11	2	1	15	2	
Interm. (273)	1	5	7	4	17	3		31	15	1	0	14	2	
Long-Term (30)	0	7	0	3	20	0		20	17	10	3	20	0	
Unknown (79)	0	24	0	3	14	3		32	4	0	0	15	6	
Arrest Location														
Indoor (821)	1	6	4	3	23	4		30	10	2	*	14	3	
Vehicle (990)	1	14	4	3	26	2		23	12	3	1	8	3	
Outdoor (643)	1	7	13	3	26	2		21	12	2	0	12	2	
Other (14)	0	7	0	0	36	0		36	7	0	0	7	7	
Unknown (23)	0	4	0	0	9	4		22	57	0	0	4	0	
Group Arrest														
One (737)	1	6	5	3	19	3		33	13	1	1	13	3	
Two (604)	1	9	4	3	27	2		28	9	2	*	13	3	
Three (366)	1	11	8	4	25	3		21	10	3	0	12	3	
Four (295)	2	11	6	4	26	2		20	15	5	0	8	1	
Five + (423)	2	12	11	3	33	3		13	13	3	0	5	3	
Unknown (66)	2	6	5	0	23	3		35	17	0	2	8	2	
Prior Drug Record														
No Record (2076)	1	10	7	3	25	3		25	12	2	*	9	3	
Marihuana (138)	1	3	4	4	35	1		18	7	1	0	25	2	
Other Without Marihuana (180)	1	5	11	1	23	4		24	11	2	0	16	4	
Marih. and Other (52)	2	4	2	4	27	0		29	10	0	0	21	2	
Unknown (45)	0	22	2	2	7	2		31	11	7	0	13	2	
Marihuana Seized														
None (126) **	3	15	5	2	14	1		29	14	0	0	14	5	
<1 Gram (427)	1	20	4	2	24	2		29	5	1	*	9	2	
1-5 Grams (595)	1	9	5	3	27	3		24	13	3	*	11	2	
6-30 Grams (615)	1	3	8	4	29	2		26	11	2	*	11	3	
31+ Grams (404)	*	4	5	4	17	3		32	15	1	1	15	3	
Unknown (324)	4	11	13	3	28	4		9	14	5	0	7	3	

* Indicates less than one percent

** It should be noted that half of the arrests in which no marihuana was seized were preceded by a "buy"

more likely to plead guilty (32% and 31%), and almost half of each group was convicted (43% and 46%). For those 30 adults who were apprehended on the basis of a long-term investigation, the pattern is not the same (37% convicted).

Arrest location also is associated with ultimate disposition. Terminations were more common among persons arrested in vehicles (50%) and arrested outdoors (52%), than among persons arrested indoors (41%). Even among indoor arrestees, however, four in ten persons were terminated prior to trial. Overall determinations of guilt do not vary by arrest location, although guilty pleas were more common among indoor arrestees (30%) than among vehicle (23%) or outdoor (21%) arrestees.

The number of persons simultaneously arrested also is associated with case outcome. The probability of conviction appears to decrease as the size of the group arrested increases. Terminations were more common among five-or-more-person groups (63%) than among groups of four (51%), three (52%) or two (46%) person groups. Thirty-seven percent of all one-person arrests were terminated prior to trial. Conversely, conviction was more common in one-person arrests (46%) than in groups of two (37%), three (31%), four (35%) or five or more (26%) persons. Stated differently, the cases of persons arrested in groups of five or more were about twice as likely as one-person arrestees to be terminated.

Prior drug arrests are not systematically associated with case outcome. Terminations were about as common among persons with no prior drug arrests (49%) as among persons with a prior marijuana arrest (48%) or a prior nonmarijuana drug arrest (45%). Terminations were somewhat less common, however, among persons with a prior arrest record involving marijuana and other drugs (39%). Determinations of guilt, by plea or verdict, were about equally common among these groups.

The amount of marijuana seized is also associated with certain case outcomes. Terminations were more common among arrestees with a seizure of less than an ounce (47 to 53%) than among persons with a seizure of more than an ounce (33%). Conversely, conviction was more common among persons with a seizure of more than an ounce (47%) than among persons with a seizure of less than an ounce (34% to 37%).³⁷

³⁷ Given this pattern, the authors strongly suspect that when the amount seized was unrecorded, it was a lesser rather than a greater amount. The incidence of terminations was considerably higher (63%) among this group than among any other, and convictions occurred considerably less often (23%). Indeed 21% of these arrestees were terminated by the police (overall, 10%) and 5% were acquitted at trial (overall, 2%).

Juvenile Dispositions. The remarkable findings in regard to juvenile dispositions are the comparatively high rate of termination and the absence of "not guilty" trial verdicts. Seventy percent of all juveniles arrested were terminated prior to trial. Those who were not terminated were tried and found guilty.³⁸

Table 26 shows variations in juvenile dispositions by various demographic characteristics and circumstances of arrest. Among juveniles, males were no more or less likely than females to be terminated or found guilty.

Among juveniles, neither gender, age nor race is highly associated with overall termination or guilt outcomes. Terminations were about equally common among males (70%) and females (72%), among arrestees 16 and under (69%) and 16 to 18 (73%), and among white (69%), black (72%) and Mexican-American (71%) arrestees. There are some differences in regard to timing of termination, i.e., the phases at which various juveniles are terminated. Terminations at the arrest phase were more common among juveniles 16 and under (24%) than among juveniles 17 to 18 (18%), and among white (22%), than black (5%) juveniles.

In regard to occupational status, terminations were more common among students (72%),³⁹ than among juveniles employed in white collar (64%) or blue collar (58%) occupations or unemployed (54%). Put differently, conviction was more likely in the case of unemployed juveniles (28%), and blue collar workers (21%) than in the case of students (16%) or white collar workers (9%).

Residence also is associated with case outcome. Terminations were more common among suburban juveniles (93%) than among permanent (69%) or transient (55%) juveniles. Conversely, guilty verdicts were more often found in the case of juveniles with permanent residences (17%) than in the case of suburban (4%) or transient (9%) juveniles.

Prior investigation also is associated with the probability of termination. As with adults, terminations were more common among juveniles without prior investigations (76%) than among juveniles with short-term (57%) or intermediate (39%) investigations. Similarly, the data on juveniles suggest that an increasing degree of investigatory activity is associated with an increasing probability of trial and a guilty verdict.

³⁸ At the time of data collection 11% of adult and 13% of juvenile cases were still pending.

³⁹ The vast majority of juvenile arrestees were high school or college students. Only 24 juveniles were employed as blue collar workers and 11 were employed as white collar workers. The difference in terminations for adult students and juvenile students may be related to age.

Table 26 Proportion of Juvenile Defendants Terminated
at Phases of Disposition and
Demographic Characteristics

	Case Terminated At-			Other Dispositions		
	Arrest Phase	Juvenile Pretrial	Trial Phase	Guilty By Trial	Pending	Unknown
Number of People (580) ***	21%	48%	1%	16%	13%	1%
Gender						
Male (436)	22%	47%	1%	17%	12%	1%
Female (144)	19	51	2	13	15	1
Age						
16 and Under (308)	24	44	1	17	13	1
17 - 18 (239)	18	54	1	14	13	0
19 - 20 (11)	0	55	0	27	9	0
21 - 22 (1)	0	100	0	0	0	0
23 - 24 (1)	0	0	0	0	100	0
Unknown (20)	30	30	15	15	10	0
Race						
White (520)	22	46	1	16	13	1
Black (43)	5	67	0	19	9	0
Spanish-speaking (14)	21	50	0	14	14	0
Other (1)	0	100	0	0	0	0
Unknown (2)	100	0	0	0	0	0
Occupation						
Student (452)	22	49	1	16	11	1
Blue Collar (24)	4	54	0	21	21	0
White Collar (11)	18	46	0	9	27	0
Unemployed (32)	13	41	0	28	13	0
Unknown						
Mobility						
Transient (33)	0	55	0	9	33	0
Semi-Permanent (1)	0	100	0	0	0	0
Permanent (513)	23	45	1	17	12	1
Suburban (28)	0	86	7	4	4	0
Unknown (5)	60	20	0	20	0	0
Prior Investigation						
No Investigation (425)	25%	50%	1%	11%	13%	0%
Short-Term (123)	11	43	3	28	11	2
Intermediate (28)	14	25	0	50	11	0
Unknown (4)	0	50	0	0	50	0
Arrest Location						
Indoor (136)	11	43	0	28	13	2
Vehicle (195)	27	44	2	12	14	1
Outdoor (235)	22	52	1	13	11	0
Other (10)	20	50	0	10	20	0
Unknown (4)	25	75	0	0	0	0
Group Arrest						
One (146)	13	37	1	30	17	0
Two (126)	16	46	1	11	24	2
Three (75)	19	49	3	17	10	1
Four (79)	34	47	0	17	3	0
Five + (136)	31	57	2	6	4	0
Unknown (18)	6	72	0	6	11	0
Prior Drug Record						
No Record (545)	22	48	1	15	13	1
Marihuana Only (14)	21	36	0	29	14	0
Other - No Marihuana (7)	14	57	0	14	0	0
Marihuana and Other (3)	0	0	0	67	33	0
Unknown (11)	9	27	0	55	9	0
Amount Seized						
None (48) **	25	50	2	21	2	0
< 1 Gram (119)	22	44	0	18	17	0
1 - 5 Grams (122)	18	48	0	14	17	1
6 - 30 Grams (169)	16	53	4	19	8	1
31+ Grams (58)	21	41	0	10	21	3
Unknown (64)	38	42	0	11	9	0

* Indicates less than one percent.

** This category includes a small number of juveniles from whom buys were made.

*** Charge and Subsequent Pretrial Phases and "Not Guilty" are inapplicable.
Other categories are not shown because of the small N (complaint, N = 1;
initial judicial, N = 1; guilty by plea, N = 1; other trial disposition,
N = 1).

As was the case in the adult system, location of juvenile arrests is associated with certain patterns of disposition. Terminations were more common among juveniles arrested outdoors (75%) and in vehicles (73%) than among those arrested indoors (54%). Correspondingly, convictions were more common among juveniles arrested indoors (28%) than among juveniles arrested in vehicles (12%) or outdoors (13%).

The number of persons arrested simultaneously is also associated with termination and determination of guilt. Terminations were much more common among juveniles arrested in groups of five or more (90%) than among juveniles arrested in four-person groups (81%), three-persons groups (71%), or in two-person groups (63%). By contrast, 51% of those arrested alone were terminated prior to trial. The likelihood of conviction followed a corresponding pattern. Guilty verdicts were returned more often for juveniles in one-person arrests (30%) than for juveniles arrested in two-person groups (11%), three-person groups (17%), four-person groups (17%) and five-or-more person groups (6%). As in the case of adults, as the size of the group increases, the probability of a guilty verdict decreases and the probability of termination increases.

Among juveniles, the amount of marihuana seized also is weakly associated with patterns of termination. Termination was somewhat less likely when over one ounce was seized (62%) than when less than one ounce was seized (66% to 73%). But this pattern is not as strong as that occurring in adult cases.

To summarize, the data presented above indicate that case outcome is associated with certain characteristics of the arrestee and circumstances of arrest for both adults and juveniles. Adults and juveniles differ greatly in both the probability of termination and the point at which cases are terminated. Gender, age, and race, however, are not systematically associated with case outcome. Although adult females are somewhat more likely to be terminated than adult males, there are no gender differences among juveniles. Age is not associated with the probability of termination among adults or juveniles,⁴⁰ although among juveniles, younger

⁴⁰ When each system is regarded as a universe, there is little association between age and disposition, within each universe. Two caveats must be noted, however. First, the termination rate is significantly higher in the juvenile system than in the adult system, a fact not unrelated to the paternal nature of the juvenile system and the age of its clientele. Second, the ages of the arrestees in each of the two systems do not cover a wide range (58% of all arrestees were under 21 and 83% were under 25); thus, age categories may not be meaningful with regard to the population in each system.

arrestees seem to be terminated earlier. Race is not associated with the probability of termination among either adults or juveniles, although among juveniles white arrestees seem to be terminated earlier than black arrestees. Case outcomes are not associated with differences in occupational groups among adults or juveniles.

Among both adults and juveniles, arrestees' residence is associated with variations in case outcome. In each case, suburban arrestees were terminated more often and found guilty less often than other resident groups. In addition, among both adults and juveniles, arrestees with transient status were terminated less often than permanent arrestees.

For both adults and juveniles, prior drug investigation also is associated with termination patterns. In each case, arrestees with no prior investigations were much more likely to be terminated than investigated arrestees. Among adults and juveniles, increasing investigatory activity is similarly related to probability of conviction. Although intensive investigations were generally uncommon among these arrestees, the data suggest that an increasing degree of investigatory activity is associated with an increasing probability of trial and conviction.

Among both adults and juveniles, arrest location and group arrests are associated with case outcome. Among both groups, persons arrested outdoors and in vehicles were much more likely to be terminated than persons arrested indoors. Correspondingly, convictions resulted more often in the case of persons arrested indoors than for persons arrested outdoors or in vehicles. In regard to group arrests, the data indicate that among both adults and juveniles, as the number of persons arrested increases, the probability of conviction decreases, and the probability of termination increases.

Prior drug arrests are not associated with case outcome for either adults or juveniles. Persons with prior drug arrest records were no more or less likely than persons without records to be terminated or found guilty. The relationship between drug seizure and case outcome depends upon the amount seized. Among adults and to lesser extent among juveniles, cases involving a seizure of more than one ounce of marihuana were terminated less often than cases involving seizures of lesser amounts.

Jurisdictional Patterns. The data in Table 27 indicate that jurisdictions differ in varying degrees in the proportion of cases terminated, the points of termination and also in regard to other dispositions. Terminations prior to trial were most common in Washington, D.C., where 71% of adult

cases and 95% of juvenile cases were either dismissed or released. Terminations were also common in adult cases in Chicago (66%) and in juvenile cases in both Tucson (88%) and Cook County (80%).

Adult terminations (overall, 48%) were least common in Virginia (27%), San Mateo (27%) and Dallas (39%). Juvenile terminations (overall, 70%) were least common in Dallas (42%) and Virginia (51%).

The data in Table 27 show that jurisdictions also vary in the points of termination, i.e., the phases at which individuals are released or their cases dismissed. Among adults, terminations occurred somewhat earlier in Washington, D.C., Omaha, and Dallas. In each of these jurisdictions, between 23% and 34% of all adult arrestees were terminated prior to the pretrial phases. This compares to the overall figure of 17% adult terminations at this point. Adult terminations at the pretrial judicial phases were most common in Chicago (58%) and least common in Virginia (9%).

Jurisdictions also differed with regard to other adult dispositions. Determinations of guilt for adults, either by plea or trial (overall, 37%), were made more often in San Mateo (70%) and Virginia (63%) than in other jurisdictions. Convictions resulted much less often in Chicago (7%) and somewhat less often in Washington, D.C. (25%). Guilty pleas among adults (overall, 25%) were obtained most often in San Mateo (68%) and Dallas (42%) and least often in Chicago (2%) and Cook County (9%). Guilty verdicts among adults (overall, 12%) were most common in Virginia (36%) and Cook County (33%), and least common in Tucson (1%), Washington, D.C. (2%) and San Mateo (2%). The data indicate that adults were tried more often in Virginia (43%) and Cook County (36%) than in other jurisdictions, and proportionately more cases were pending at the time of data collection in Tucson (32%) and Chicago (21%) than elsewhere.

In regard to juveniles, Table 27 indicates that although proportionately more juveniles were terminated in Washington, D.C. (95%), Tucson (88%), and Cook County (80%), these jurisdictions differ in the points at which cases were terminated. Juvenile cases terminated earlier in Cook County (73% at the arrest phase) than in other jurisdictions. As discussed earlier (Table 26), most juvenile terminations occurred at the pretrial phase. The data in Table 27 indicate that this is particularly the case in Washington, D.C. (92%) and Tucson (62%).

Other juvenile dispositions also vary by jurisdiction. Determinations of guilt at trial (overall,

16%) were more common in Dallas (32%) and San Mateo (28%) than in other jurisdictions. Guilty verdicts were less common in Tucson (2%) and Washington (4%). As indicated earlier, none of the juveniles in the study population was found not guilty at trial and only one juvenile defendant pleaded guilty (in Maryland). The data indicate that juveniles were tried more often in Dallas (32%) and San Mateo (28%) and proportionately more juvenile cases were pending in Dallas (26%) and Virginia (25%), at the time of data collection.

PHASES OF CRIMINAL PROCESS

Criminal process, the method by which the criminal system deals with individual cases, begins with the police and later involves prosecutors, defense attorneys and judges. The specific procedures involved in the processing of marijuana arrestees are described below and identified with six phases for adults (the arrest phase, charge phase, complaint phase, initial formal judicial phase, subsequent pretrial phase and trial phase) and three phases for juveniles (arrest, pretrial and trial). **Arrest Phase.** The utility of a study of the operation of the criminal justice system is a function of official records. The initial phase for the researcher is the point in time when the police officer makes contact with an individual with regard to a marijuana-related activity and chooses to record that contact. For this reason, two caveats are in order.

First, the criminal process begins long before arrest, extending back to explicit or implicit decisions by police and prosecution officials regarding investigative or "detection" policy. It is physically impossible for the police to detect and arrest all marijuana offenders. Consequently, some decision must be made about the steps which can feasibly be taken to enforce the law. In practice, the criminal law is not a set of specific instructions, but a general guideline to be applied by the law enforcement community. The discretion, arbitration and judgment which precede police-suspect contact constitute an essential phase in the criminal process, but one which is immune from empirical scrutiny.

The second caveat relates to the initial contact phase. Those familiar with the criminal justice system uniformly note that not all marijuana-related contacts are recorded by the police. Each of the local supervisors in the present study emphasized the prevalence of such informal disposition in their respective jurisdictions. One supervisor put it this way:

In many areas the names which appear on police records are only a portion of the total number of persons dealt with by the police for marijuana offenses. However, short of a study monitoring the daily contacts of police officers,

Table 27 Proportion of Defendants Terminated and Other Dispositions For All Jurisdictions

	Cases Terminated At-							Other Dispositions-						
	Arrest Phase	Charge Phase	Complaint Phase	Initial Formal Judicial	Subsequent Pretrial	Juvenile Pretrial	Trial Phase	Guilty By Plea	Guilty By Trial	Not Guilty	Other Trial	Disposition	Pending	
Total (3071)	5%	8%	5%	3%	20%	9%	2%	20%	13%	2%	*	*	11%	
Adults (2491)	1	9	7	3	25	0	3	25	12	2	*	*	11	
Juveniles (580)	21	0	*	*	0	48	1	*	16	0	*	*	13	
Dallas (850)	0	19	0	1	13	6	0	35	8	*	0	0	14	
Adults (726)	0	23	0	1	15	0	0	42	4	*	0	0	12	
Juveniles (124)	0	0	0	0	0	42	0	0	0	0	0	0	26	
Cook County (502)	14	5	2	1	23	1	4	8	30	3	*	*	7	
Adults (431)	4	6	2	1	27	0	5	9	33	3	1	1	6	
Juveniles (71)	73	0	0	0	0	7	0	0	10	0	0	0	10	
Maryland (404)	9	5	1	4	15	22	1	18	9	3	*	*	10	
Adults (244)	2	7	1	7	25	0	0	29	8	5	*	*	11	
Juveniles (160)	20	0	0	0	0	55	3	1	11	0	0	0	9	
Washington, D.C. (390)	0	3	24	3	26	17	1	19	2	1	0	0	3	
Adults (318)	0	4	30	4	32	0	1	23	2	1	0	0	4	
Juveniles (72)	0	0	0	0	0	92	3	0	4	0	0	0	1	
Chicago (362)**	1	1	*	2	56	0	6	2	5	4	1	1	21	
Virginia (165)	3	3	4	4	2	13	5	19	31	4	1	1	9	
Adults (116)	3	4	4	6	3	0	7	27	36	6	1	1	3	
Juveniles (49)	4	0	2	0	0	45	0	0	18	0	2	2	25	
San Mateo (140)	17	2	1	1	9	11	1	40	13	0	0	0	4	
Adults (83)	2	4	1	1	16	0	2	68	2	0	0	0	4	
Juveniles (57)	39	0	0	2	0	28	0	0	28	0	0	0	4	
Tucson (127)	9	1	17	13	2	21	0	10	2	0	1	1	24	
Adults (85)	0	1	25	20	4	0	0	15	1	0	1	1	32	
Juveniles (42)	26	0	0	0	0	62	0	0	2	0	0	0	10	
Omaha (113)**	1	0	24	5	11	0	4	28	15	0	0	0	11	
Rural Virginia (18)**	0	0	0	0	0	0	6	11	11	72	0	0	0	

* Indicates less than one percent

** Data presented for Chicago and Omaha pertain only to adults for reasons noted at the beginning of this paper. Also, the number of cases in rural Virginia is too small to warrant meaningful comparisons.

**Table 28 Arrest Phase Disposition
of Adults and Juveniles**

Number of People	<u>Adults</u> 2491	<u>Juveniles</u> 580
<u>Arrestee Was -</u>		
Taken to "Stationhouse"	99%	
Released & Arrest Not Contemplated	1	
Released & Arrest Contemplated	1	
Taken To "Station" & Arrest Not Contemplated	*	
<u>Petition Was -</u>		
Contemplated, Custody		48%
Contemplated, Custody Parents		23
Not Contemplated, Arrestee Released Warn.		5
Not Contemplated, Custody Parents		16
Not Contemplated, Custody Third Party		*
Released Warning, Petition Contemplated		*
Not Contemplated, Taken Into Custody		1
File Sealed, No Further Info.		2

* Indicates less than one percent

information regarding the incidence and character of such activity is not available.

The data presented regarding the "arrest" phase, then, are incomplete. Not all apprehensions or contacts are recorded in police records. Thus, police terminations reported in this study are considerably understated although the scope of this discrepancy is not measurable.

The data in Table 28 indicate that when the apprehension was recorded, virtually all adults (99%) but less than half of juveniles (48%) were taken into custody immediately thereafter. The data suggest that in the case of adults, unlike juveniles, the decision to arrest also predisposed a decision to file charges. Among juveniles, 39% were released to the custody of parents and 5% were released with a warning. Among juveniles, a petition was contemplated in 71% of the cases, and not contemplated⁴¹ in about 24% of the cases. Two percent of these juveniles had their files sealed.

⁴¹ Collection of these data required a judgment by the researcher as to whether the arresting officer intended to refer the case for subsequent proceedings. This judgment, regarding whether or not a petition was "contemplated," was generally facilitated by the written remarks of the arresting officer.

The data in Table 29 indicate that the processing of juvenile arrestees does not vary by either gender or age, but does vary by race, occupation, mobility, prior investigation and arrest location. In regard to race, the data indicate that black juveniles were more likely than white juveniles to be kept in police custody. Where a petition was contemplated, 77% of black juveniles and 45% of white juveniles were retained at least temporarily, in police custody. Release to the custody of parents was more common among white juveniles (25%) than among black juveniles (16%). Petitions more often were not contemplated for white juveniles (25%) than for black juveniles (7%). Situations in which petitions were not contemplated and the juvenile was released to the custody of parents were more common among white (18%) than among black (5%) juveniles.

The data also indicate that the arresting officer was less likely to contemplate a petition in the case of a student than an employed juvenile. Students also were released more often (48%) than those employed as blue collar workers (13%) or white collar workers (27%). When petitions were contemplated, students were released more often

Table 29 Arrest Phase Disposition of Juveniles and Demographic Characteristics

	Arrestee Charged As Adult	Petition Contemplated, Arrestee Taken Into Custody	Petition Contemplated, Arrestee Released Into Custody Of Parents	Petition Not Contemplated, Arrestee Released With Warning	Petition Not Contemplated, Arrestee Released Into Custody Of Parents	Petition Not Contemplated, Arrestee Released Into Custody Of Third Party	Petition Contemplated, Arrestee Released With Warning	Petition Not Contemplated, Arrestee Taken Into Custody	Files Sealed, No Further Informations
Total (580)	(17) 3%	(279) 48%	(136) 23%	(30) 5%	(95) 16%	(1) *%	(1) *%	(7) 1%	(14) 2%
Gender									
Male (436)	4%	45%	25%	6%	16%	0%	*%	1%	3%
Female (144)	0	58	18	2	18	1	0	2	1
Age									
16 and Under (308)	0	48	23	6	20	*	0	1	1
17 - 18 (239)	4	49	24	5	11	0	*	1	5
19 - 20 (11)	55	36	9	0	0	0	0	0	0
21 - 22 (1)	100	0	0	0	0	0	0	0	0
23 - 24 (1)	0	0	0	0	100	0	0	0	0
Unknown (20)	0	40	25	0	30	0	5	0	0
Race									
White (520)	3	45	25	6	18	*	*	1	2
Black (43)	0	77	16	0	5	0	0	2	0
Spanish-speaking (14)	0	71	0	0	7	0	0	7	14
Unknown (2)	0	0	0	0	50	0	0	0	50
Occupation									
Student (452)	2	47	25	5	18	0	*	1	2
Blue Collar (24)	17	67	13	0	0	0	0	0	4
White Collar (11)	9	64	9	0	18	0	0	0	0
Unemployed (32)	6	66	13	6	6	0	0	3	0
Unknown (61)	0	36	28	8	18	2	0	2	7
Mobility									
Transient (33)	6%	94%	0%	0%	0%	0%	0%	0%	0%
Semi-Permanent (1)	100	0	0	0	0	0	0	0	0
Permanent (513)	3	44	26	6	18	*	*	1	2
Suburban (28)	0	82	7	4	7	0	0	0	0
Unknown (5)	0	40	0	0	20	0	0	0	40
Prior Investigation									
No Investigation (425)	4	47	21	5	20	*	0	1	3
Short-Term (123)	1	51	31	8	5	0	1	1	2
Intermediate (28)	0	43	39	0	18	0	0	0	0
Unknown (4)	0	100	0	0	0	0	0	0	0
Arrest Location									
Indoor (136)	3	59	26	2	9	0	0	1	2
Vehicle (195)	4	45	20	3	20	1	0	2	6
Outdoor (235)	2	46	23	9	17	0	*	1	*
Other (10)	0	0	80	0	20	0	0	0	0
Unknown (4)	0	50	0	25	25	0	0	0	0

* Indicates less than one percent

into the custody of parents (25%) than blue collar (13%) or white collar (9%) juveniles. Conversely, the police retained custody of the juvenile more often in the case of blue collar arrestees (67%) and white collar arrestees (64%) than in the case of students (47%).

In regard to mobility, the data indicate that petitions were contemplated more often in the case of transient (94%) and suburban (89%) juveniles than in the case of permanent juveniles (70%). Where a petition was contemplated, transients more often were taken into custody (94%) than

suburban arrestees (82%) or permanent juveniles (44%).

Table 29 indicates that prior investigation also is associated with variations in processing juveniles. Petitions were contemplated more often in the case of investigated juveniles (82%) than non-investigated juveniles (68%). In regard to custody where petitions were contemplated, the data indicate that noninvestigated juveniles were less likely to be released (21%) than juveniles subject to short-term (32%) or intermediate (39%) investigations.

Arrest location also is associated with the processing of juveniles at the arrest phase. Petitions were contemplated more often for juveniles arrested indoors (85%) than for juveniles arrested outdoors (69%) or in vehicles (65%). Petitions were not contemplated and the juvenile was released more often when the arrest location was a vehicle (24%) or outdoors (26%) than when the juvenile was arrested indoors (11%).

Charge Phase. Nearly all adults arrested for marihuana offenses also were charged with those offenses. The data in Table 30 indicate that 2% of arrested adults were not charged. (By this stage, 3% of the apprehended adults had been terminated.)

Table 30 also shows that the specific offenses most often charged pertain to possession of marihuana. Of the adults charged, about 90% involved at least one possession of marihuana charge. More than half of the adults (61%) were charged with possession of marihuana only; others were charged with possession of marihuana and a non-drug charge (11%), possession of marihuana and possession of another drug (9%), possession of marihuana and another drug-related charge (5%) and possession and sale of marihuana (2%). Conversely, 4% of the arrested adults were charged with sale of marihuana.

The data also indicate that an additional 7% of the adult arrestees were terminated by the police after being charged, with "no evidence against the arrestee" being the reason most commonly recorded. The remaining 89% of the adult arrestees were referred to the prosecuting attorney for subsequent processing.

The data in Table 31 show various demographic characteristics of adults charged. Although gender is unrelated to charge type, age and race are associated with certain charges. Possession charges were more common among persons 17 to 18 (73%), than among any older age group (overall, 63%). The data also indicate that the frequency of multiple charges increases with age, particularly with regard to possession of marihuana and other drug

charges or nondrug charges. With regard to race, the data indicate that marihuana-possession-only charges occurred about equally often among white (64%) and black (59%) arrestees, although possession and nondrug offenses were charged more often to black (20%) than white (9%) arrestees. Occupational groups do not differ greatly in the distribution of charges.

Variations in mobility are associated with certain charge patterns. Possession-only charges were much less common among suburban (46%) than permanent or transient arrestees (both 64%). Charges for possession and a nondrug offense were more common among permanent (13%) and suburban (14%) arrestees than among transient (8%) or semipermanent (5%) arrestees.

The data in Table 32 show relationships between charge and circumstances of detection and arrest. With regard to prior investigation, the data indicate that marihuana-possession-only charges were more common among arrestees without prior investigations (72%) than among persons whose arrests have been preceded by short-term (50%), long-term (36%) or intermediate (31%) investigations. Arrestees investigated most intensely were most likely to be charged with sale of marihuana and/or other drugs. Sale charges were more common among arrestees with intermediate (43%) and long-term (32%) investigations than among persons with short-term (6%) or no investigations (less than 1%).

Arrest location also is associated with charge patterns. Marihuana-possession-only charges were more common among persons arrested in vehicles (76%) than among those arrested outdoors (61%) or indoors (50%). The data also indicate that possession-only charges were more common in arrests made by general patrolmen (74%) than in those made by general detectives (67%) or local narcotics or vice officers (43%).

With regard to prior drug arrest record, the data indicate that possession-only charges were somewhat more common among persons with no prior drug arrests (65%) than among persons with prior drug arrests (between 41% and 58%).

The data also indicate that charge type is strongly associated with amount of marihuana seized. First, as was pointed out in the analysis accompanying Table 15, in more than half of the cases involving no seizure of marihuana, undercover purchases had been made prior to arrest. The data in Table 32 parallel this finding by indicating that 60% of those from whom no marihuana was seized were charged with sale offenses.

Paralleling earlier data regarding incidence of "buys" (overall, 6%; marihuana-only, 5%) is the

**Table 30 Charge Phase Disposition of
Adults and Juveniles**

Number of People	<u>Total</u> 3071	<u>Adults</u> 2491	<u>Juveniles</u> ** 580
<u>Charged</u>	79%	97%	3%
Possession - Marihuana	50	61	2
Sale - Marihuana	3	3	0
Possession & Sale - Marihuana	2	2	0
Possession Marihuana, Poss. Other	8	9	*
Possession Marihuana, Sale Other	*	*	*
Possession Marihuana & Non- Drug Charge	9	11	0
Sale Marihuana, Sale Other	1	1	0
Sale Marihuana & Non-Drug Charge	*	*	0
Possession Marihuana & Other Drug Related Charge	4	5	*
Other Charge	3	4	*
<u>No Charge - Diverted</u>	*	*	0
<u>No Charge - Released</u>	1	2	0
<u>Post-Charge Disposition</u>			
Referred to Prosecuting Attorney	73	89	3
Arrestee Released	6	7	0
No Evidence Against Arrestee	4	4	0
Small Amt. Not Justify Prosecution	1	1	0
Other	1	1	0
Unlawful search	*	*	0
Unknown	*	*	0
<u>Arrestee Diverted</u>	*	*	0

* Indicates less than one percent

** Juveniles pass through the charge phase only when they enter the process through the adult system. In this sample, 3% of the arrestees ultimately processed in the juvenile system were earlier involved in the charge phase of the adult system; all were charged and were referred to the prosecuting attorney before they were diverted to the juvenile system.

Table 31 Type of Charge and Demographic Characteristics

	Possession of Marihuana	Sale of Marihuana	Possession and Sale of Marihuana	Possession of Marihuana & Possession of Other Drug	Possession of Marihuana & Sale of Other Drug	Possession of Marihuana & Nondrug Charge	Sale of Marihuana & Sale of Other Drug	Sale of Marihuana & Nondrug Charge	Possession of Marihuana & Other Drug-Related Charge	Other Charge
Total (2439)	63%	3%	2%	10%	1%	12%	1%	*%	5%	4%
Gender										
Males (2149)	63%	4%	2%	9%	1%	12%	1%	*%	5%	4%
Females (287)	61	1	1	17	*	6	0	0	8	5
Age										
< 16 (3)	33	33	33	0	0	0	0	0	0	0
17 - 18 (479)	73	3	1	7	0	8	2	*	3	3
19 - 20 (86)	64	3	4	8	*	13	1	*	6	2
21 - 22 (463)	60	3	1	10	1	13	*	0	6	5
23 - 24 (299)	62	4	3	12	0	8	0	0	7	5
25 - 26 (139)	58	3	1	13	0	12	0	0	9	4
27 - 28 (84)	51	4	1	13	1	13	0	0	11	6
29 - 30 (61)	62	3	0	15	0	12	0	0	3	5
31 + (166)	49	4	0	13	2	21	1	1	4	4
Unknown (59)	71	9	0	7	0	2	0	0	3	9
Race										
White (1783)	64	4	2	10	*	9	1	*	6	4
Black (578)	59	2	1	9	1	20	1	*	5	3
Spanish-speaking (58)	71	3	3	3	0	9	2	0	2	7
Unknown (13)	85	0	0	0	0	0	8	0	8	0
Occupation										
Student (367)	68%	3%	3%	8%	*%	10%	1%	0%	4%	3%
Criminal Employment (23)	48	0	4	13	4	13	4	0	9	4
Blue Collar (823)	62	4	2	9	1	13	1	*	6	3
White Collar (444)	62	4	3	12	1	8	1	0	5	5
Military (65)	55	5	3	5	0	9	0	0	22	2
Unemployed (315)	63	2	3	9	1	13	0	*	6	3
Unknown (402)	65	4	1	10	*	13	1	0	3	4
Mobility										
Transient (297)	64	2	4	10	0	8	1	0	9	2
Semi-Permanent (120)	60	2	3	11	2	5	2	1	10	6
Permanent (1833)	64	4	2	10	1	13	1	*	3	4
Suburban (92)	46	3	2	4	0	14	0	0	24	7
Unknown (97)	62	2	3	9	0	10	0	0	10	3

* Indicates less than one percent

Table 32 Type of Charge and Circumstances
of Detection and Arrest

	Possession of Marihuana	Sale of Marihuana	Possession and Sale of Marihuana	Possession of Marihuana & Possession Other Drug	Possession of Marihuana & Sale Other Drug	Possession of Marihuana & Nondrug Charge	Sale of Marihuana & Sale Other Drug	Sale of Marihuana & Nondrug Charge	Possession of Marihuana & Other Drug-Related Charge	Other Charge
Total (2439)	63%	3%	2%	10%	1%	12%	1%	*%	5%	4%
<u>Scope of Investigation</u>										
No Investigation (1694)	72%	*%	*%	6%	*%	14%	0%	*%	5%	2%
Short-Term (372)	50	3	1	22	1	9	1	0	8	6
Intermediate (266)	31	22	13	7	3	5	4	1	5	10
Long-Term (28)	36	21	4	7	0	0	7	0	18	7
Unknown (79)	54	6	1	29	0	5	1	0	1	1
<u>Location of Arrest</u>										
Indoor (814)	50	6	3	19	1	9	1	0	7	4
Vehicle (962)	76	1	1	5	*	12	*	0	2	3
Outdoor (626)	61	4	3	4	1	15	1	*	8	4
Other (14)	71	14	0	14	0	0	0	0	0	0
Unknown (23)	52	17	4	4	0	9	9	4	0	0
<u>Arresting Officer</u>										
General Patrol (1407)	74	1	1	6	*	14	*	*	3	2
Local Narc. (643)	43	10	5	19	1	8	2	*	7	6
General Detective (85)	67	4	5	4	0	8	0	0	6	7
Local Unknown (110)	64	3	0	10	0	11	3	0	4	6
<u>Prior Contact</u>										
No Prior Drug Arrest (2028)	65%	3%	2%	9%	*%	11%	*%	*%	6%	4%
Marihuana Only (132)	58	4	2	10	1	12	4	0	6	3
Other W/O Marihuana (178)	58	3	0	14	1	17	0	1	5	3
Marihuana and Other (51)	41	6	6	16	2	14	2	0	10	4
Prior Arrest Unknown (45)	58	4	0	48	4	11	2	0	0	2
<u>Amount Seized</u>										
None (110)	26	38	10	3	1	5	9	2	2	6
< 1 Gram (425)	72	*	0	8	1	11	0	0	6	2
1 - 5 Grams (591)	67	1	*	10	*	14	*	*	5	2
6 - 30 Grams (607)	62	2	1	10	1	15	*	0	6	3
31 + Grams (407)	54	5	6	14	*	7	1	0	6	7
Amount Unknown (299)	71	2	*	6	*	10	0	0	6	6

* Indicates less than one percent

data in Table 32 indicating that 6% of the arrestees were charged with sale offenses, including 5% charged with sale of marihuana and 2% charged with sale of other drugs.⁴²

Table 32 also suggests that amount of marihuana seized is related to charge-type. Persons from whom more than one ounce was seized were less likely to be charged with possession-only (54%) than persons from whom less than a gram (72%), 1 to 5 grams (67%) and 6 to 30 grams (62%) were seized.

Conversely, persons from whom more than one ounce was seized were charged with sale offenses 12 times more often than persons from whom five grams or less were seized and three times more often than persons from whom 6 to 30 grams were seized. Similarly, persons from whom more than five grams were seized were somewhat more likely to be charged with more than one offense (33% and 34%) than persons from whom five grams or less were seized (25% and 29%).

Table 33 shows the ultimate dispositions of the cases charged at this phase in the criminal process. The data indicate that variations in disposition are associated with the specific offense or offenses with which the arrestees were initially charged.⁴³ Terminations were considerably more common among adults initially charged with possession and a drug-related offense (61%), possession and a nondrug offense (55%), or possession of marihuana-only (48%) than among persons charged with possession of marihuana and possession of other drugs (26%), sale of marihuana alone (24%), or possession and sale of marihuana (23%).

The data indicate that conviction for one or more offenses was more likely among persons initially charged with possession and sale of marihuana (55%), possession of marihuana and possession of other drugs (50%), or sale of marihuana alone (49%), than among persons initially charged with possession of marihuana only (36%) or possession of marihuana and a drug-related offense (30%). Guilt was determined least often among persons initially charged with possession of marihuana and a nondrug offense (27%).

Guilty pleas were obtained more often in cases involving initial charges of possession and sale of marihuana (49%) than in cases involving initial charges of possession of marihuana and possession of other drugs (34%), sale of marihuana alone

(28%), possession of marihuana (25%), and possession of marihuana and a drug-related offense (23%). Guilty pleas were obtained least often among persons initially charged with possession of marihuana and a nondrug offense (15%).

Guilt at trial was determined more often among persons initially charged with sale of marihuana (21%), than those initially charged with possession of marihuana and possession of other drugs (16%), possession of marihuana and a nondrug offense (12%), or possession of marihuana only (11%). Guilt was determined least often among persons initially charged with possession of marihuana and a drug-related offense (7%) and possession and sale of marihuana (6%). Trial verdicts of not guilty were uncommon for all charge types, involving no more than 3% of the cases within any charge category.⁴⁴

Complaint Phase. More than 2,000 of the arrestees in the study population were referred by the police to the prosecuting attorney for a decision whether or not to institute prosecution by the filing of a complaint. The data in Table 34 indicate that among adults, complaints were filed in more than 90% of these cases. Complaints were not filed for 6% of the adults reaching this stage, and complaints were filed but not processed subsequently for 2% of these adults.

Table 35 shows initial prosecutorial dispositions for various charge types. The data indicate that more than half (55%) of the arrestees were charged with felonies, and about a third (33%) were charged with misdemeanors. In 7% of the cases, all charges were dismissed. Sale of marihuana charges more often were filed as felonies (93%) than were charges of possession only (68%), possession and sale of marihuana (47%) or possession of marihuana and possession of other drugs (40%). Felonies were filed less often in cases where the initial charges were possession of marihuana and a nondrug offense (23%) or possession of marihuana and another drug-related charge (16%). Correspondingly, the charges were more often filed as misdemeanors in cases where persons were initially charged with possession of marihuana and a nondrug offense (67%), possession of marihuana and other drug-related offenses (67%), possession of marihuana and possession of another

⁴² Individual sale charge types total 7% due to rounding error.

⁴³ The number of persons charged with possession of marihuana and sale of other drugs (12), sale of marihuana and sale of other drugs (16) and sale of marihuana and a nondrug offense (3) is too small to permit meaningful comparisons.

⁴⁴ The data in Table 33 reflect the plea bargaining process, as various charges are played off against one another. This process is the heart of the post-charge phase of the criminal justice system. Especially in drug cases, when the facts are not often in dispute, cases go to trial only when the defendant is unwilling to plead guilty to one or more offenses, and the prosecution is unwilling to dismiss all charges.

Table 33 Ultimate Disposition of Charges

	Case Terminated At-						Other Dispositions					
	Charge Phase	Complaint Phase	Initial Judicial	Subsequent Pretrial	Juvenile Pretrial	Trial Phase	Guilty By Plee	Guilty By Trial	Not Guilty	Other Trial Dispositions	Pending	Unknown
Total (2439)	(189) 8%	(163) 7%	(81) 3%	(619) 25%	(9) *	(62) 3%	(624) 26%	(294) 12%	(53) 2%	(7) *	(273) 11%	(65) 3%
Charge												
Possession of Marihuana (1541)	10%	6%	3%	27%	1%	2%	25%	11%	3%	1%	10%	2%
Sale of Marih. (83)	7	4	5	8	0	0	28	21	0	0	24	4
Possession & Sale of Marihuana (47)	0	2	6	9	0	6	49	6	2	0	17	2
Possession of Marih. & Possession Other (232)	3	1	2	17	1	2	34	16	2	*	15	7
Possession of Marih. & Sale Other (12)	0	0	0	8	0	0	42	33	0	0	17	0
Possession of Marih. & Nondrug (283)	4	10	4	31	0	6	15	12	1	1	14	2
Sale of Marih. & Sale Other (16)	0%	0%	0%	0%	0%	0%	69%	19%	0%	0%	6%	6%
Sale of Marih. & Nondrug (3)	0	0	0	33	0	0	67	0	0	0	0	0
Possession of Marih. & Drug Related (132)	0	17	4	37	1	2	23	7	1	1	8	2
Other (90)	6	9	3	18	1	6	27	13	3	1	12	1

* Indicates less than one percent

drug (58%), and possession and sale of marihuana (51%). Misdemeanors were filed less often in cases where the individual was charged with possession of marihuana only (24%). One percent of the cases initially charging sale of marihuana only were filed as misdemeanors.⁴⁵

Table 35 also shows bail proceedings for each charge type. The data indicate that 45% of the

⁴⁵ Criminal penalties available in each jurisdiction may account for variations in felony and misdemeanor charges, particularly the high percentage of felony prosecutions for possession only. One interesting occurrence is that in 24% of the cases initially involving possession and sale of marihuana, one charge was dismissed by the prosecutor. In 60% of these cases, the remaining charge was filed as a misdemeanor.

defendants were released on bail, but specific bail procedures varied by charge. Defendants were released on bail more often when the charge was possession of marihuana and a nondrug offense (51%) and possession of marihuana only (47%) than when the charge was possession of marihuana and possession of other drugs (39%), possession and sale of marihuana (38%) or possession of marihuana and other drug-related charges (33%). Persons charged with sale of marihuana were least often released on bail (31%).

The amount of bail set for most defendants was between \$500 and \$1,000. The amount of bail set was generally higher for sale charges than for possession charges. Bail amounts over \$2,000 were

**Table 34 Complaint Phase Disposition
of Adults and Juveniles**

Number of People	<u>Total</u> 2250	<u>Adults</u> 2233	<u>Juveniles</u> 17
Complaint Filed	90%	90%	94%
Complaint Filed - No Subsequent Proceedings	2	2	0
No Complaint Filed	6	6	6
Case Diverted	0	0	0
Charges Dropped	1	1	0

set more often for persons charged with sale of marihuana (29%) and possession of marihuana and possession of other drugs (29%) than for persons charged with possession and sale of marihuana (20%), possession of marihuana and other drug-related offenses (15%) or possession of marihuana and a nondrug offense (12%). Persons charged with possession of marihuana were least likely (7%) to have bail set at over \$2,000, although 20% had bail set at over \$1,000.

The data in Table 36 pertain to cases for which charges were dismissed at the complaint phase by the prosecuting attorney.⁴⁶ The reasons most commonly recorded for dismissal were no evidence (39%) and unlawful search (19%). "No evidence" was designated more often in dismissals of possession and drug-related charges (64%) than in dismissals of possession charges alone (42%). Unlawful search more often was designated as a reason for dismissals of possession and drug-related charges (27%) than for dismissals of possession charges alone (18%).

Table 37 relates complaint phase dispositions to certain demographic characteristics of arrestees. The data indicate that charges were dismissed more often for females (13%) than for males (6%), although other dispositions are not associated with gender. With regard to age, the data indicate that charges were dismissed more often for arrestees between 25 and 28 than for persons older or younger. Charges were filed as felonies more often in the case of persons 17 to 18 (79%) than among other persons (overall, 68%). With regard to race, the data indicate that dismissals

were no more common among white (7%) than black (5%) arrestees. Blacks, however, were charged more often with felonies (76%) than were white defendants (66%). Conversely, misdemeanors were filed more often for white (26%) than black (17%) defendants.

Table 37 indicates that prior investigation also is associated with certain dispositions at this phase. Dismissals were somewhat more common among persons arrested spontaneously (8%) than among persons arrested after a short-term investigation (4%). Surprisingly, felonies were filed more often for defendants arrested spontaneously (70%) or after a short-term investigation (74%) than among persons arrested after an intermediate investigation (34%). Stated differently, proportionately more persons whose arrests were preceded by intermediate investigations had charges filed as misdemeanors (59%) than persons whose arrests were preceded by short-term (22%) or no investigations (22%). The data suggest that increasing investigatory activity is associated with an increasing probability of a misdemeanor charge.⁴⁷

The data in Table 38 show bail proceedings at this phase. The data indicate that of the arrestees whose cases were not dismissed, nearly half (47%) were released on bail. Fewer persons were released on writ of habeas corpus (10%), or on personal recognizance (9%) or to the custody of a third party (1%). Bail was not set and the defendant

⁴⁷ This finding is inexplicable by any substantive criteria. The authors suspect that more detailed analysis would reveal jurisdictional variations. For example, a jurisdiction where most arrests were spontaneous but where possession can be a felony (such as in Chicago) might distort the figures.

⁴⁶ These figures are based on the first reasons given for the first charge dismissed.

Adults
Table 35 Complaint Phase Disposition and
Bail Proceedings by Charge

	Possession of Marihuana	Sale of Marihuana	Possession and Sale of Marihuana	Possession of Marihuana & Possession of Other Drug	Possession of Marihuana & Sale of Other Drug	Possession of Marihuana & Nondrug Charge	Sale of Marihuana & Sale of Other Drug	Sale of Marihuana & Nondrug Charge	Possession of Marihuana & Other Drug-Related Charge	Other Charge	Total
Total	(1399) 62%	(73) 3%	(47) 2%	(224) 10%	(12) 1%	(269) 12%	(16) 1%	(3) *	(129) 6%	(78) 4%	(2250)
<u>Initial Disposition</u>											
<u>By Prosecution</u>											
Charge Dismissed	7%	4%	2%	1%	0%	11%	0%	0%	17%	10%	7%
Filed Felony	68	93	36	38	25	18	100	33	4	44	55
Filed Misdemeanor	24	1	36	56	67	60	0	67	55	39	33
Felony and Misdemeanor	0	0	0	0	0	0	0	0	0	0	0
Some Dis., Rem. Felony	*	0	9	1	8	3	0	0	6	0	1
Some Dis., Rem. Mis.	*	0	15	2	0	7	0	0	12	8	3
Some Dis., Rem. Fel. & Mis.	0	0	2	1	0	2	0	0	6	0	1
Disposition Unknown	*	1	0	0	0	0	0	0	0	0	*
<u>Bail Proceedings</u>	(1279)	(65)	(45)	(212)	(12)	(226)	(16)	(3)	(107)	(69)	(204)
Defendant released on personal recognizance	9	5	27	7	0	9	0	0	25	16	10
Defendant released in third party custody	1	5	2	1	8	2	0	0	10	3	2
Defendant released on bail	47	31	38	39	42	51	38	0	33	52	45
Bail set, defendant could not raise bail	6	9	7	13	25	11	25	67	8	16	8
Bail set, no further information	14	29	13	15	8	14	38	33	16	3	15
Bail not set, defendant held in custody	5	6	2	3	17	5	0	0	5	4	5
<u>Bail Proceedings (Continued)</u>											
Released on writ of habeas corpus	10%	0%	0%	15%	0%	1%	0%	0%	0%	0%	8%
No information about bail proceedings	8	15	11	7	0	7	0	0	3	6	8
<u>Amount of Bail</u>											
No Bail/No Information	28	31	42	25	25	23	0	0	43	29	28
\$1 To \$250	4	2	4	1	0	3	0	0	2	6	4
\$251 To \$500	13	2	2	6	8	17	0	0	14	6	12
\$501 To \$1000	23	22	13	11	8	20	0	0	13	15	20
\$1001 To \$1500	6	3	7	9	0	6	13	0	6	6	6
\$1501 To \$2000	7	8	4	12	25	4	6	0	4	4	7
Over \$2000	7	29	20	29	25	12	69	67	15	25	13
Amount Unknown	13	5	7	9	8	14	13	33	4	10	12

* Indicates less than one percent

was held in custody in 5% of the cases. In 6% of the cases, bail was set but the defendant could not raise it.

The data in Table 38 indicate that bail proceedings did not vary systematically with gender, age, race (although a release on writ of habeas corpus was more common among white (12%) than black (6%) defendants) or occupation. Prior investi-

gation, however, is associated with certain bail proceedings. Table 38 indicates that persons arrested after intermediate investigations were more often released on personal recognizance (29%) than were persons arrested after short-term (3%) or no investigations (8%). Release on bail was more common among persons arrested spontaneously (48%) and among persons arrested after

Table 36 Charges Dismissed and Reasons for Dismissal at Complaint Phase

	Unlawful Search	No Evidence	Small Amount	No Merit	No Prior Record	Agrees To Plea	Prosecution Confident	Other	Unknown
Total (160)	(30) 19%	(63) 39%	(6) 4%	(4) 3%	(2) 1%	(3) 2%	(7) 4%	(6) 4%	(39) 24%
First Charge									
Possession Marihuana (95)	18%	42%	4%	3%	2%	0%	0%	5%	25%
Sale (3)	33	67	0	0	0	0	0	0	0
Possession & Sale (1)	0	100	0	0	0	0	0	0	0
Possession Marihuana, Possess Other (2)	0	50	0	0	0	0	0	0	50
Possession Marihuana, Nondrug (29)	7	10	3	3	0	7	21	3	45
Possession Marihuana, Drug Related (22)	27	64	5	0	0	0	0	0	4
Other (8)	50	25	0	0	0	13	13	0	0

short-term investigations (52%) than among persons arrested after an intermediate investigation (34%).

Table 39 compares amount of bail set and whether or not bail was raised by certain demographic characteristics and circumstances of arrest. With regard to amount of bail, the data indicate that gender, age, race and occupational groups are generally similar. The data also indicate, however, that bail amount is associated with scope of prior investigation. Bail amounts of over \$1,000 were set more often for defendants arrested after a short-term investigation (34%) than for those arrested after an intermediate (10%) investigation or no investigation (17%).

Bail was raised in nearly half (47%) of all cases.⁴⁸ Raised bail is not strongly associated with

⁴⁸ It should be noted that information concerning the raising of bail was unknown in 37% of the cases. Findings in this area must be interpreted in light of this problem.

gender, age, race, or occupation. However, raised bail is associated with prior investigation and prior drug arrests. The data indicate that bail was raised less often for defendants arrested after an intermediate investigation (34%) than for persons arrested after a short-term investigation (52%) or after no investigation (48%). With regard to prior drug arrests, the data indicate that bail was raised less often for persons with nonmarihuana prior drug arrests (38%) than among persons with a prior marihuana arrest (49%) or among persons with no prior drug arrest record (48%).⁴⁹

⁴⁹ This relationship may be a function of the size of the unknown factor. On the other hand, if the relationship is not artifactual, it is interesting in light of the apparent absence of a relationship between prior drug arrests and amount of bail set.

**Table 37 Complaint Phase Dispositions and
Demographic Characteristics**

	Charges Dismissed	Filed Felony	Filed Misdemeanor	Some Dismissed Rem. Felony	Some Dism. Rem. Mis.	Disposition
Total (1399)	(97) 7%	(955) 68%	(336) 24%	(2) *%	(4) *%	(5) *%
<u>Gender</u>						
Males (1244)	6%	69%	24%	*%	*%	*%
Females (154)	13	65	21	0	0	1
<u>Age</u>						
<16 (1)	0	0	100	0	0	0
17 - 18 (309)	4	79	17	0	0	*
19 - 20 (397)	9	61	30	0	*	*
21 - 22 (257)	7	65	26	*	*	*
23 - 24 (169)	5	69	25	*	*	0
25 - 26 (79)	10	63	25	0	0	1
27 - 28 (40)	15	65	18	0	3	0
29 - 30 (34)	6	71	24	0	0	0
31 + (73)	7	74	19	0	0	0
Unknown (40)	5	75	18	0	0	3
<u>Race</u>						
White (1049)	7	66	26	*	*	*
Black (300)	5	76	17	0	1	1
Spanish-speaking (35)	6	77	17	0	0	0
Unknown (11)	9	64	27	0	0	0
<u>Occupation</u>						
Student (234)	4	73	21	*	*	*
Criminal Employment (8)	0	88	13	0	0	0
Blue Collar (460)	4	71	25	0	*	0
White Collar (255)	8	68	24	0	0	*
Military (36)	22	39	39	0	0	0
Unemployed (181)	4	66	27	1	1	1
Unknown (225)	16	64	20	0	0	*
<u>Scope of Investigation</u>						
No Invest. (1107)	8	70	22	*	*	1
Short-Term (172)	4	74	22	1	0	0
Interm. (83)	6	34	59	0	1	0
Long-Term (10)	0	0	100	0	0	0
Unknown (27)	0	93	7	0	0	0

* Indicates less than one percent

Table 38 Bail Proceedings and Demographic Characteristics

	Released- Personal Recognition	Released- Third Party	Released-Bail	Bail Set- Could Not Raise	Bail Set- Release Unknown	Bail Not Set Defendant Held	Released- Habeas Corpus	No Info On Bail Proceedings
Total (1279)	(114) 9%	(15) 1%	(601) 47%	(76) 6%	(179) 14%	(58) 5%	(128) 10%	(108) 8%
<u>Gender</u>								
Males (1148)	8%	1%	48%	6%	14%	5%	10%	9%
Females (130)	14	0	42	4	13	5	15	8
<u>Age</u>								
<16 (1)	0	0	100	0	0	0	0	0
17 - 18 (291)	6	2	49	4	16	4	13	7
19 - 20 (355)	11	1	43	6	12	6	11	10
21 - 22 (235)	10	1	49	6	13	3	10	7
23 - 24 (157)	8	1	52	8	13	5	6	8
25 - 26 (70)	14	0	49	9	20	3	1	4
27 - 28 (34)	3	3	50	3	15	9	9	9
29 - 30 (32)	6	0	53	6	9	6	9	9
31 + (66)	12	0	35	12	18	5	12	6
Unknown (38)	8	0	40	3	18	5	5	21
<u>Race</u>								
White (957)	8	1	46	6	14	4	12	9
Black (277)	11	1	51	7	14	5	6	5
Spanish-speaking (33)	21	0	39	9	9	6	3	12
Unknown (10)	0	0	50	0	0	10	0	40
<u>Occupation</u>								
Student (223)	12	1	51	3	10	5	11	8
Criminal Employ. (8)	13	0	63	13	0	0	13	0
Blue Collar (437)	9	1	51	6	14	3	9	7
White Collar (229)	9	1	53	3	14	3	11	7
Military (28)	18	14	43	4	11	0	7	4
Unemployed (169)	7	1	38	12	18	3	12	8
Unknown (185)	7	0	35	8	16	11	8	16
<u>Scope of Investigation</u>								
No Invest. (1005)	8	1	48	6	14	5	10	9
Short-Term (161)	3	1	52	5	14	5	14	6
Intermediate (77)	29	1	34	9	12	3	5	8
Long-Term (10)	20	0	30	0	10	0	0	40
Unknown (26)	4	0	31	4	31	4	23	4

Table 39 Amount of Bail Set and Demographic Characteristics

	No Bail/ No Inform.	Bail: \$1 - 500.	Bail: \$500 - 1000.	Bail: Over \$1000.	Bail Amount Unknown	Bail Raised	Bail Not Raised	Other/ Unknown
Total (1279)	(358) 28%	(214) 17%	(297) 23%	(248) 19%	(162) 13%	(601) 47%	(76) 6%	(473) 37%
<u>Gender</u>								
Males (1148)	27%	17%	23%	19%	13%	48%	6%	37%
Females (130)	34	11	25	22	9	42	4	40
<u>Age</u>								
< 16 (1)	0	100	0	0	0	100	0	0
17 - 18 (291)	24	18	27	14	18	49	4	40
19 - 20 (355)	34	17	22	16	11	43	6	39
21 - 22 (235)	27	18	23	19	14	49	6	34
23 - 24 (157)	24	18	29	19	11	52	8	31
25 - 26 (70)	24	14	21	31	9	49	9	29
27 - 28 (34)	24	15	27	21	15	50	3	41
29 - 30 (32)	25	25	13	34	3	53	6	34
31 + (66)	27	11	14	41	8	35	12	41
Unknown (38)	34	8	16	24	18	40	3	50
<u>Race</u>								
White (957)	28	14	25	19	14	46	6	39
Black (277)	26	26	17	22	9	51	7	30
Spanish-speaking (33)	39	18	12	21	9	39	9	30
Unknown (10)	50	0	30	20	0	50	0	50
<u>Occupation</u>								
Student (223)	29	18	24	14	15	51	3	34
Criminal (8)	13	0	0	75	13	63	13	13
Blue Collar (437)	25	20	23	21	11	51	6	34
White Collar (228)	27	14	27	22	11	53	3	35
Military (28)	43	21	25	7	4	43	4	21
Unemployed (169)	25	14	28	23	11	38	12	42
Unknown (185)	37	12	15	17	18	35	8	50
<u>Prior Investigation</u>								
No Investigation (1005)	28%	17%	25%	17%	13%	48%	6%	37%
Short-Term (161)	19	16	20	34	11	52	5	39
Intermediate (77)	40	14	16	10	20	34	9	27
Long-Term (10)	60	0	10	30	0	30	0	50
Unknown (26)	27	8	15	46	4	31	4	62
<u>Location of Arrest</u>								
Indoor (357)	33	12	18	22	15	41	6	42
Vehicle (598)	25	18	25	19	13	50	6	36
Outdoor (303)	27	21	26	17	11	48	7	34
Unknown (12)	58	0	33	8	0	42	0	50
<u>Prior Drug Record</u>								
No Drug Record (1082)	29	16	24	19	13	48	6	36
Marihuana Only (71)	20	28	24	20	9	49	9	37
Other Drugs/ W/O Marih. (89)	29	16	19	27	9	38	8	47
Marih., Other Drugs (19)	32	16	26	16	11	37	11	42
Prior Arrest But Unknown (18)	22	6	17	39	17	56	6	28
<u>Amount Seized</u>								
None (23)	57	9	13	22	0	35	0	100
< 1 Gram (216)	26	18	16	26	15	39	13	42
1 - 5 Grams (336)	23	17	26	19	16	51	5	36
6 - 30 Grams (333)	33	17	20	16	14	43	3	41
31 Grams + (195)	26	16	20	26	12	47	5	37
Unknown Amount (176)	30	15	38	13	5	60	5	27

Initial Judicial Phase. Table 40 shows adult dispositions by charge at the initial formal judicial phase. A substantial number of these defendants, regardless of particular charge, pleaded not guilty (88%). In comparatively few instances was the entire case dismissed or diverted (5%). Four percent of the adults pleaded guilty to all or some charges at this phase.

With regard to specific charges, the data indicate that guilty pleas to all or some charges were more common among defendants charged with multiple offenses involving sale than among those charged with single offenses or less serious charges. Thus, early plea bargaining is reflected in the fact that 15% of those charged with possession and sale of marihuana pleaded guilty to some charge in return for dismissal of the other; similarly, 18% of those charged with possession of marihuana and sale of other drugs pleaded guilty to one charge in return for dismissal of the other. By contrast there were fewer guilty pleas among those charged with possession of marihuana and a nondrug charge (6%), possession of marihuana only (5%), possession of marihuana and possession of other drugs (3%) and possession of marihuana and another drug charge (0%).

All counts were dismissed for similar proportions of defendants charged with sale of marihuana (6%) and possession of marihuana (4%). As noted among persons charged with possession and sale of marihuana, 15% involved a dismissal of one count and a guilty plea to the remaining count.

Subsequent Pretrial Proceedings. Of the 1,409 adults at the subsequent pretrial phase, pretrial motions to suppress evidence were made by at least 17%.⁵⁰ Of the motions made, 77% were granted. Table 41 shows pretrial motion practice for defendants charged with possession of marihuana. Of these defendants, 18% filed motions to suppress evidence. The data indicate that among possession defendants who made motions, the motions were granted in 79% of the cases.

The data in Table 41 show motion practice and outcome by demographic characteristics of the arrestees charged with possession. Neither gender, age, occupation, prior contact, nor drug seizures is systematically associated with motion practice. Race, however, is associated with pretrial motion practice. The data indicate that motions were made more often in the case of black (26%) than white (15%) defendants.

The data in Table 42 pertain to changes in plea during the subsequent pretrial phase. The data

indicate that plea changes were relatively uniform across various charge types. Plea changes were about equally common among persons charged with possession of marihuana and other drug-related offenses (33%), possession of marihuana only (36%), possession and sale of marihuana (35%), and possession of marihuana and a non-drug offense (36%). Plea changes were somewhat more common among defendants charged with sale of marihuana (39%) and possession of marihuana and other drugs (44%).

With respect to the greatest proportion of defendants, adults charged only with possession of marihuana, disposition during the subsequent pretrial phase is easily summarized. The data (not shown) indicate that almost half (48%) of these cases were either dismissed or diverted. Table 42 indicates that 36% changed their pleas to guilty, including some 4% charged with multiple counts of possession who pleaded to one count in exchange for dismissal of the others. Finally, after the plea bargaining process was completed, 15% of the possession-only cases remained in the system—the defendants maintained their not guilty pleas and the charges were not dismissed.

Table 43 documents the reasons given for dismissal of charges during subsequent pretrial proceedings. The data indicate that, without regard to charge, the reasons most often recorded were unlawful search (31%) and no evidence (23%). Table 43 also indicates that unlawful search was designated more often in dismissals of cases involving possession-only (35%) and possession of marihuana and other drug-related offenses (35%) than in dismissals of cases involving possession of marihuana and possession of other drugs (17%) or possession of marihuana and nondrug offenses (13%). "No evidence" was given as a reason about equally often for dismissals of cases involving possession-only (24%), possession of marihuana and other drug-related offenses (23%), possession of marihuana and nondrug offenses (20%), and possession of marihuana and possession of other drugs (19%). "No prosecutorial merit" was given most often as the reason for dismissing cases involving possession of marihuana and nondrug offenses (30%).

Juvenile Pretrial Phase. Table 44 shows the manner by which juvenile proceedings were instituted and the petition recommendations of the officers involved in juvenile arrests.

Table 44 shows that juvenile proceedings were instituted most often by apprehension (55%), in which the arrestee was brought directly to juvenile authorities. A third (33%) of the juvenile proceedings followed the filing of a complaint, and

⁵⁰ The extent of motion practice is unknown in many cases.

Table 40 Initial Judicial Dispositions
for Adults by Charge

	All Counts Dismissed Or Diverged (77) 4%	Case Diverged To Juvenile System (11) 1%	Pleaded Guilty To All Counts Some Dismissed, Remaining Pleaded Not Guilty (29) 1%	Pleaded Not Guilty- Pending (143) 7%	Pleaded Not Guilty-To Trial (239) 12%	Pleaded Not Guilty-More Pre-trial (2409) 6%	Drug Charges Dropped *	Disposition Unknown (55) 3%
Total (2034)								
Possession of Marihuana (1354)	4%	*%	1%	7%	13%	69%	0%	2%
Sale of Marihuana (65)	6	0	2	8	19	55	0	5
Possession and Sale of Marihuana (34)	3	6	15	6	3	68	0	0
Possession of Marihuana & Possession Other Drug (215)	2	1	2	8	8	72	0	7
Possession of Marihuana & Sale Other Drug (11)	0	0	18	0	18	63	0	0
Possession of Marihuana & Nondrug Charge (176)	2	0	5	9	14	68	2	1
Sale of Marihuana & Sale Other Drug (16)	0	0	0	0	0	94	0	6
Sale of Marihuana & Nondrug Charge (2)	0	0	0	0	0	100	0	0
Possession of Marihuana & Other Drug-Related Charge (82)	5	1	0	6	5	83	0	0
Other Charge (79)	6	0	1	5	10	72	1	3

* Indicates less than one percent

**Table 41 Pretrial Motions to Suppress Evidence
for Adult Defendants and Demographic
Characteristics: Possession Only**

	Motion(s) Made-All Denied	Motion(s) Made-All Granted	Motion(s)- 1 Or More Granted 1 Or More Denied	No Motions Made/Unknown
Total (945)	(35) 4%	(134) 14%	(1) *%	(775) 82%
<u>Gender</u>				
Males (846)	4%	14%	8%	82%
Females (98)	2	18	0	80
<u>Age</u>				
< 16 (0)	0	0	0	0
17 - 18 (200)	4	17	0	80
19 - 20 (250)	3	12	0	85
21 - 22 (187)	3	15	1	82
23 - 24 (118)	4	19	0	77
25 - 26 (58)	7	12	0	81
27 - 28 (28)	7	18	0	75
29 - 30 (23)	4	22	0	74
31 + (56)	5	4	0	91
Unknown (25)	0	4	0	96
<u>Race</u>				
White (668)	2	13	*	85
Black (246)	7	19	0	74
Spanish-speaking (28)	4	11	0	86
Unknown (2)	0	0	0	100
<u>Occupation</u>				
Student (169)	2	14	0	85
Criminal Employment (6)	0	17	0	83
Blue Collar (334)	3	15	0	81
White Collar (173)	6	15	0	80
Military (22)	9	18	0	73
Unemployed (114)	8	9	0	83
Unknown (127)	0	16	1	84
<u>Amount Seized</u>				
None (9)	0	22	0	78
< 1 Gram (188)	3	12	0	86
1 - 5 Grams (269)	6	18	*	76
6 - 30 Grams (243)	2	10	0	89
31 + Grams (129)	4	13	0	83
Amount Unknown (107)	5	21	0	75

* Indicates less than one percent

Table 42 Subsequent Changes in Plea
for Adults by Charge

Charge	ALL Counts Felony, No Plea Change	ALL Counts Misdemeanor, No Plea Change	Both Felony And Misdemeanor, No Plea Change	Felony, Changed To Guilty	Misdemeanor, Changed To Guilty	Both Felony And Misdemeanor, Changed To Guilty	Changed For Misdemeanor, Not For Felony	Changed For Felony, Not For Misdemeanor	Other Or Unknown
Possession Of Marihuana (945)	47%	16%	1%	21%	9%	0%	0	0	1%
Sale of Marihuana (31)	58	0	3	39	0	0	0	0	0
Possession and Sale of Marihuana (26)	19	0	12	27	0	4	0	4	35
Possession of Marihuana and Other Drugs (150)	25	5	21	21	4	13	0	6	5
Possession of Marihuana and Sale Other Drugs (8)	0	0	50	25	0	0	0	13	13
Possession of Marihuana and Nondrug Offense (107)	8	32	24	9	13	1	3	2	8
Sale of Marihuana and Sale of Other (14)	29	0	0	71	0	0	0	0	0
Possession of Marihuana and Other Drug-Related Offense (68)	2	32	22	4	21	0	4	4	10

* Indicates less than one percent

Table 43 Charges Dismissed and Reasons for Dismissal
at Subsequent Pretrial Proceedings:
First Charge and First Reason

	Unlawful Search	No Evidence	Small Amount	Cooperating Defendant	No Merit	No Prior Criminal Record	Agrees To Plea	Other	Unknown
Total (612)	(191) 31%	(138) 23%	(5) 1%	(4) 1%	(30) 5%	(6) 1%	(8) 1%	(59) 10%	(171) 30%
Possession of Marihuana (455)	35%	24%	*%	*%	2%	1%	2%	9%	28%
Sale of Marihuana (7)	14	0	0	14	0	0	14	0	57
Possession and Sale of Marihuana (3)	33	0	0	0	0	0	0	0	67
Possession of Marihuana and Possession Other Drug (42)	17	19	2	5	2	2	0	29	24
Possession of Marihuana and Sale Other Drug (1)	100	0	0	0	0	0	0	0	0
Possession of Marihuana and Nondrug Charge (54)	13	20	4	0	30	0	0	4	30
Possession of Marihuana and Other Drug-Related Charge (26)	35	23	0	0	4	8	0	12	19
Other Charge (24)	29	21	0	0	4	0	0	13	33

* Indicates less than one percent

Table 44 Source of Pretrial Proceedings and
Officer's Recommendation for Juveniles

	Proceedings Instituted By-					Apprehending Officer Recommended-		
	Filing Of Complaint	Apprehension- Brought Directly To Juvenile Auth.	Apprehension- Referral From Criminal Justice System	Unknown		Petition Be Filed	Petition Not Be Filed	Unknown
Total (457)	(150) 33%	(250) 55%	(56) 12%	(1)		(321) 70%	(58) 13%	(78) 17%
Gender								
Male (341)	30%	57%	13%	1%		70%	13%	18%
Female (116)	42	48	10	0		72	12	16
Age								
16 + Under (233)	32	58	9	*		65	14	21
17 - 18 (196)	34	54	12	0		75	12	14
19 - 20 (12)	8	25	67	0		92	8	0
21 - 22 (1)	0	0	100	0		100	0	0
23 - 24 (1)	100	0	0	0		100	0	0
Age Unknown (14)	43	50	7	0		79	7	14
Race								
White (403)	32	56	11	*		70	14	17
Black (42)	48	45	7	0		88	7	5
Spanish-speaking (11)	0	36	64	0		27	0	73
Unknown (0)	-	-	-	-		-	-	-
Occupation								
Student (353)	32	58	10	0		69	13	18
Blue Collar (25)	36	32	32	0		80	4	16
White Collar (10)	20	60	20	0		70	10	20
Unemployed (26)	31	58	12	0		81	8	12
Unknown (43)	44	37	16	2		65	23	12
Mobility								
Transient (32)	31	59	9	0		88	3	9
Semi-Perm. (1)	0	0	100	0		100	0	0
Permanent (394)	35	52	13	*		69	12	19
Suburban (28)	7	93	0	0		71	29	0
Unknown (2)	0	50	50	0		0	50	50
Prior Investigation								
No Investigation (319)	28%	59%	12%	1%		69%	13%	18%
Short-Term (108)	49	41	10	0		71	12	17
Intermediate (26)	19	58	23	0		77	12	12
Long-Term (0)	-	-	-	-		-	-	-
Unknown (4)	50	50	0	0		75	0	25
Arrest Location								
Indoor (121)	45	44	12	0		71	15	14
Vehicle (143)	36	48	16	0		73	6	20
Outdoor (182)	22	67	10	1		68	15	17
Other (8)	38	63	0	0		75	25	0
Unknown (3)	67	33	0	0		33	33	33
Prior Contact								
No Prior Drug Arrest (428)	33	55	12	*		70	13	17
Marihuana Only (11)	36	46	18	0		82	0	18
Other Drugs W/O Marth. (5)	60	20	20	0		60	0	40
Marihuana W/ Other Drug (3)	33	33	33	0		100	0	0
Prior But Unknown (10)	20	80	0	0		80	10	10
Amount Seized								
None (36)	36	44	19	0		61	31	8
< 1 Gram	45	47	8	0		67	13	20
1 - 5 Grams	23	63	13	1		68	8	24
6 - 30 Grams	32	57	11	0		73	15	13
31 + 6 Grams	30	47	23	0		77	4	19
Unknown Amount	30	63	8	0		78	10	13

12% were referred to juvenile authorities from the criminal (adult) system. The data indicate that gender, race, prior investigation and arrest location are associated with variations in the source of juvenile proceedings. For example, complaints were filed more often for females (42%) than males (30%), and more often for black (48%) than white (32%) juveniles. Complaints also were filed more often for juveniles with short-term investigations (49%) than for those with no prior investigation (28%). As might be expected, proportionately more juveniles arrested indoors (45%) had complaints filed than those arrested in vehicles (36%) or outdoors (22%).

Most juvenile arrests (70%) involved a recommendation⁵¹ by the arresting officer that a petition be filed. The data indicate that recommendations were made as often for males (70%) as females (72%). However, such recommendations were less common among juveniles 16 and under (65%), than juveniles 17 to 18 (75%), and more often were made for black (88%) than white (70%) arrestees. The data also indicate that filing was recommended more often in the case of transient (88%) than suburban (71%) or permanent (69%) juveniles. Petition recommendations are not systematically associated with prior investigation, arrest location, prior contact or amount of marijuana seized.

Despite the inclination of apprehending officers to file petitions, the appropriate authority chose not to do so in 41% of the cases. The data in Table 45 indicate that the reasons given most often for not filing a petition were that the arrestee's "personal situation militates against prosecution" (26%), no criminal record (16%), and inability to link evidence to the arrestee (14%). Petitions were filed in 59% of the cases. Nearly all of these were delinquency petitions (98%); two percent of the petitions filed designated the arrestee as a "child in need of supervision." Of the delinquency petitions filed, 62% designated possession of marijuana as the reason for issuance of the petition. Other offenses listed were possession of marijuana and possession of other drugs (6%), possession of marijuana and a nondrug charge (5%), sale of marijuana (3%) and possession of marijuana and other drug-related offenses (3%).

Table 46 shows pretrial dispositions for juveniles. The data indicate that somewhat less than two-thirds of the cases (61%) which reached the

pretrial phase⁵² were sent to trial, and a third (33%) were dismissed. Certain demographic characteristics were associated with petition dismissals. Although petitions were dismissed about as often among males (31%) as females (37%), they were dismissed less often among juveniles 16 and under (28%) than among juveniles 17 to 18 (40%). The data also indicate that black juveniles (44%) were dismissed more often than white (31%) juveniles. Juveniles arrested spontaneously were dismissed more often (40%) than juveniles arrested after a short-term investigation (20%) or after an intermediate investigation (14%). The data indicate that dismissals also vary somewhat by arrest location, from indoor (28%) to vehicle (32%) to outdoor (36%). Neither prior contact nor amount of marijuana seized is associated with petition dismissals.

Trial Phase. Of the 3,071 arrestees in the study population, 522 (17%) reached trial. This group included 418 adults (17%) and 104 juveniles (18%). Of the defendants reaching trial, 375 (72%) were charged at this point in the process with possession of marijuana only. Five percent were charged with sale offenses, 16% were charged with multiple counts including possession and 7% were charged with other offenses.

Table 47 presents data pertaining to trial motion practice. The data indicate that 8% of all persons reaching the trial phase made motions to suppress evidence. Such motions were granted in two-thirds of the cases in which they were made. Although sample sizes are very small, motion practices appear to be associated with certain demographic characteristics. Motions were made more often by males (9%) than females (0), and more often by persons over 22 (12% to 19%) than persons 22 and under (2% to 10%). The data indicate that motions were made more often by black (16%) than white (6%) defendants, and more often by blue collar (10%) and white collar (11%) workers than by students (4%).

Motions also were made more often by persons from whom less than five grams were seized (13% to 14%) than persons with larger seizures (3% to 5%) and such motions were granted in 85% of the cases involving less than a gram of marijuana.

Table 48 shows motion practice for defendants charged at the trial phase with possession of marijuana. The data indicate that 8% of these defendants made motions to suppress evidence. The data in Table 48 suggest relationships similar to those observed for all trial defendants, regardless of charge. Thus, among possession defendants, mo-

⁵¹ A "recommendation" by the arresting officer that a petition should be filed presumes that he has some discretion not to institute juvenile proceedings after apprehension.

⁵² Seventy percent of all juvenile cases terminated prior to trial.

Table 45 Petition Proceedings for Juveniles

Number of People	Juvenile Arrestees
	457
<u>No Petition Filed</u> (186)	41%
<u>First Reason(s)</u>	
• Search Unlawful Because Incident To Unlawful Arrest	5
• Search Unlawful Because Unreasonable In Scope	2
• Cannot Link Evidence To Arrestee	14
• No Usable Amount	1
• Small Amount Does Not Justify Prosecution	2
• Arrestee Agrees To Cooperate In Apprehending Others	2
• Arrestee Agrees To Turn "State Evidence"	1
• No Prosecutorial Merit	1
• Dismiss Required In "Interests Of Justice"	12
• Arrestee Has No Prior Criminal Record	16
• Arrestee's Personal Situation Militates Against Prosecution	26
• Arrestee Certified To Juvenile Authorities	4
• Prosecution Failed To Establish <u>Prima Facie</u> Or Reasonable Cause For Defendant To Be Held	1
• Other	15
• Reason Unknown	10
 <u>Petition Filed</u> (271)	 59%
Neglected Child	0
Child In Need Of Supervision	2
Delinquent Child -	96
Possession of Marihuana	62
Sale of Marihuana	3
Possession And Sale	*
Possession of Marihuana and Possession Other	6
Possession of Marihuana and Nondrug Charge	5
Possession of Marihuana and Other Drug Related	3
Sale of Marihuana and Other Drug Related	*
Other Charge	20

tions again were made more often by males (9%) than females (0), and more often by black (16%) than white (6%) defendants. Also motions were made more often by blue collar (11%) and white collar (13%) workers than students (4%). Motions also were made more often by defendants arrested spontaneously (11%) than by those arrested after investigations (0 to 1%). And, de-

fendants from whom less than five grams of marihuana was seized more often made motions (14%) than defendants with larger seizures (2% to 3%). Again, the motion was granted in almost 80% of the cases when less than a gram was seized.

Table 49 shows trial dispositions for defendants charged with various offenses. Of the 522 defendants reaching the trial phase, 69 (13%) were

Table 46 Pretrial Dispositions for Juveniles

	Petition Dismissed	Some Counts Dismissed	Case Diverted	Petition Pending, To Trial	Unknown
Total (271)	(88) 32%	(3) 1%	(13) 5%	(166) 61%	(1) *
<u>Gender</u>					
Male (203)	31%	2%	5%	62%	0%
Female (68)	37	0	3	59	2
<u>Age</u>					
16 and Under (137)	28	1	4	67	1
17 - 18 (113)	40	1	5	54	0
19 - 20 (11)	36	9	18	36	0
21 - 22 (1)	100	0	0	0	0
23 - 24 (1)	0	0	0	100	0
Unknown (8)	0	0	0	100	0
<u>Race</u>					
White (241)	31	1	5	63	*
Black (23)	44	0	4	52	0
Spanish-speaking (6)	33	0	17	50	0
<u>Occupation</u>					
Student (202)	35	1	3	61	1
Blue Collar (19)	37	0	16	47	0
White Collar (7)	29	0	43	29	0
Unemployed (21)	38	5	0	57	0
Unknown (22)	5	0	5	91	0
<u>Mobility</u>					
Transient (18)	22	0	17	61	0
Semi-Permanent (1)	0	100	0	0	0
Permanent (241)	32	1	4	62	*
Suburban (10)	60	0	0	40	0
Unknown (1)	0	0	0	100	0
<u>Prior Investigation</u>					
No Investigation (177)	40	2	6	53	1
Short-Term (69)	20	0	3	77	0
Intermediate (22)	14	0	5	82	0
Unknown (3)	33	0	0	67	0
<u>Arrest Location</u>					
Indoor (86)	28	0	4	67	1
Vehicle (27)	32	1	8	59	0
Outdoor (93)	36	2	3	59	0
Other (5)	40	0	0	60	0
Unknown (2)	100	0	0	0	0
<u>Prior Contact</u>					
No Prior Drug (248)	33%	1%	5%	61%	*/
Marihuana Only (10)	40	0	0	60	0
Other-No Marihuana (3)	67	0	0	33	0
Marihuana and Other (3)	0	33	33	33	0
Unknown (7)	0	0	0	100	0
<u>Amount Seized</u>					
None (17)	29	0	0	71	0
< 1 Gram (18)	30	3	5	62	0
1 - 5 Grams (53)	25	0	9	64	2
6 - 30 Grams (86)	40	0	5	56	0
31 Grams + (36)	33	3	3	61	0
Unknown (19)	32	0	0	68	0

Table 47 Trial Motions to Suppress Evidence
and Demographic Characteristics:
All Charges

	Motion(s) Made-All Denied	Motion(s) Made-All Granted	Motion(s)- 1 Or More Granted 1 Or More Denied	No Motions Made/Unknown
Total (522)	(13) 3%	(26) 5%	(0) 0%	(483) 93%
<u>Gender</u>				
Male (465)	3%	6%	0%	92%
Female (57)	0	0	0	100
<u>Age</u>				
16 and Under (58)	0	2	0	98
17 - 18 (134)	4	6	0	90
19 - 20 (124)	2	3	0	95
21 - 22 (72)	3	1	0	96
23 - 24 (50)	2	10	0	88
25 - 26 (22)	5	14	0	82
27 - 28 (11)	9	9	0	82
29 - 30 (6)	0	17	0	83
31 + (24)	4	8	0	88
Unknown (21)	0	0	0	100
<u>Race</u>				
White (414)	2	4	0	94
Black (91)	6	10	0	85
Spanish-speaking (10)	10	0	0	90
Unknown (6)	0	0	0	100
<u>Occupation</u>				
Student (153)	1	3	0	96
Criminal (3)	0	0	0	100
Blue Collar (149)	5	5	0	91
White Collar (74)	4	7	0	89
Military (11)	0	0	0	100
Unemployed (57)	0	5	0	95
Unknown (75)	1	9	0	89
<u>Mobility</u>				
Transient (40)	0%	0%	0%	100%
Semi-Permanent (32)	0	0	0	100
Permanent (426)	3	5	0	92
Suburban (5)	0	40	0	60
Unknown (19)	5	11	0	84
<u>Prior Contact</u>				
No Prior (453)	3	5	0	92
Marihuana Only (17)	0	0	0	100
Other-No Marihuana (30)	0	7	0	93
Marihuana and Other (7)	0	0	0	100
Unknown (15)	0	7	0	93
<u>Amount Seized</u>				
None (30)	0	0	0	100
< 1 Gram (59)	2	12	0	86
1 - 5 Grams (129)	5	8	0	88
6 - 30 Grams (136)	1	2	0	98
31 + Grams (89)	2	3	0	94
Unknown (79)	3	6	0	91

Table 48 Trial Motions to Suppress Evidence
and Demographic Characteristics:
Possession Only

	Motion(s) Made-All Denied	Motion(s) Made-All Granted	Motion(s)- 1 or More Granted 1 or More Denied	No Motions Made/Unknown
Total (375)	(11) 3%	(19) 5%	(0) 0%	(345) 92%
<u>Gender</u>				
Male (338)	3%	6%	0%	91%
Female (37)	0	0	0	100
<u>Age</u>				
16 and Under (44)	0	2	0	98
17 - 18 (100)	4	6	0	90
19 - 20 (85)	2	4	0	94
21 - 22 (49)	2	2	0	96
23 - 24 (40)	3	13	0	85
25 - 26 (15)	7	13	0	80
27 - 28 (7)	14	0	0	86
29 - 30 (5)	0	20	0	80
31 + (13)	8	0	0	92
Unknown (17)	0	0	0	100
<u>Race</u>				
White (298)	2	4	0	94
Black (65)	7	9	0	83
Spanish-speaking (6)	17	0	0	83
Unknown (6)	0	0	0	100
<u>Occupation</u>				
Student (105)	1	3	0	96
Blue Collar (101)	6	5	0	89
White Collar (55)	6	7	0	87
Military (9)	0	0	0	100
Unemployed (42)	0	2	0	98
Unknown (61)	2	10	0	86
<u>Mobility</u>				
Transient (32)	0%	0%	0%	100%
Semi-Permanent (19)	0	0	0	100
Permanent (306)	3	5	0	92
Suburban (3)	0	67	0	33
Unknown (15)	7	7	0	87
<u>Prior Investigation</u>				
No Investigation (274)	4	7	0	89
Short-Term (69)	0	1	0	99
Intermediate (24)	0	0	0	100
Long-Term (5)	0	0	0	100
Unknown (3)	0	0	0	100
<u>Amount Seized</u>				
None (16)	0	0	0	100
< 1 Gram (38)	3	11	0	87
1 - 5 Grams (103)	7	7	0	86
6 - 30 Grams (107)	1	2	0	97
31 Grams + (50)	0	2	0	98
Unknown (61)	3	8	0	89

Table 49 Trial Disposition by Charge

	All Charges Dismissed	Guilty On All Charges	Not Guilty On All Charges	Guilty On At Least One And Other Disposition	Other Disposition	Disposition Unknown
Total (522)	(69) 13%	(346) 66%	(53) 10%	(39) 8%	(8) 2%	(7) 2%
<u>Charge</u>						
Possession of Marihuana (375)	12%	72%	12%	2%	1%	2%
Sale of Marihuana (14)	0	100	0	0	0	0
Possession And Sale of Marihuana (8)	38	25	13	25	0	0
Possession of Marihuana, Possession Other (31)	10	61	7	19	3	0
Possession of Marihuana, Sale Other (3)	0	33	0	67	0	0
Possession of Marihuana And Nondrug (40)	23	38	3	33	3	3
Sale of Marihuana And Sale Other (2)	0	50	0	50	0	0
Possession of Marihuana And Other Drug-Related (12)	0	75	0	17	8	0
Sale of Marihuana And Drug Related (1)	0	0	0	100	0	0
Other Charge (36)	22	47	8	17	6	0

terminated. All charges were dismissed against 7% of the juveniles and 15% of the adults. Of those defendants who were tried, 76% were convicted of all counts, 9% were convicted of some count and 12% were acquitted of all counts. (In 3% of the cases, hung juries or mistrials resulted or the outcome was unknown.)

The data indicate that guilty verdicts, on all or some counts, were somewhat more common in cases involving possession of marihuana and possession of other drugs (80%) than in cases involving possession of marihuana only (74%) or possession of marihuana and a nondrug offense (71%). Acquittals occurred more often in cases involving possession of marihuana only (12%) than in cases involving possession of marihuana and possession of other drugs (7%) or possession of marihuana and a nondrug offense (3%). Dismissals (all charges) were more common in cases involving possession of marihuana and a nondrug offense (23%) than in cases involving possession of marihuana only (12%) or possession of marihuana and possession of another drug (10%).

Table 50 shows trial dispositions for defendants charged with possession of marihuana only (72% of all cases reaching the trial phase). Nineteen percent of these defendants were juvenile and 81% were adult. The data indicate that trial dispositions are associated with a number of demographic variables. Guilty verdicts on one or more charges occurred more often for white (76%) than black (61%) defendants, and more often for students (88%) than white collar (62%) or blue collar (62%) workers. Conviction on one or more counts resulted more often for permanent (75%) than transient (63%) arrestees. Conviction is also associated with scope of prior investigation. The data indicate that guilt on one or more counts was determined somewhat more often among defendants arrested after an intermediate investigation (83%) than among defendants arrested after a short-term investigation (74%) or after no investigation (73%). Age and amount of marihuana seized do not appear to be associated with outcome at trial.

The data in Table 50 show corresponding patterns for the other trial dispositions. Trial verdicts of not guilty were more common among females (22%) than males (11%) and were more common among black (20%) than white (11%) defendants. Not guilty was also more common for blue collar (20%) and white collar (20%) workers than for students (5%). Transient defendants were found not guilty more often (22%) than permanent (12%) or semipermanent (5%) defendants.

Finally, trial dismissals were similarly associated with certain demographic variables. Black defendants were dismissed more often (19%) than white defendants (11%). Blue collar (16%) and white collar (15%) workers were dismissed more often than students (5%).

SENTENCING

Of the more than 3,000 arrestees in this study population, about 32% reached a phase in the criminal process where sentencing decisions were made. The sentences assessed in these cases again reflect the full variety of judicial procedure, from jurisdictional variations in formal sentencing alternatives to the more judgmental decisions associated with "plea bargaining."

The data in Table 51 show the maximum sentences available to the courts for defendants in this study population. The data indicate that the overwhelming proportion of individuals reaching the sentencing process were convicted of possession of marihuana only (82%). By contrast, about 6% were convicted of sale offenses. The remaining defendants in the sentencing population were convicted of combinations of possession and other offenses (4%) and other offenses only (8%). Table 51 indicates that without regard to specific offenses, over a third (36%) of these defendants could have been sentenced to incarceration for more than ten years. More than a fourth (27%) could have been incarcerated for six months to one year. Stated differently, 33% of these defendants could have been incarcerated for up to one year, and 54% could have been incarcerated for more than one year.⁵³ Or, to state it still another way, the data indicate that 90% of the defendants could have been sentenced to incarceration for over six months. About half (51%) of the defendants could have been incarcerated for more than five years.

The actual sentences assessed are shown in Table 52. The data indicate that sentencing varied, predictably, by offense. In general, sentences involving incarceration were considerably more common among defendants convicted of sale of marihuana or sale of other drugs, or both, than among defendants convicted of possession of marihuana or

⁵³ The common definition of a misdemeanor is an offense which may be penalized by incarceration for less than one year, generally in a local prison facility. Thus, 38% of the cases in the study population, regardless of specific charge, could be designated as misdemeanors. Felony is defined commonly as an offense which may be penalized by incarceration for more than one year, generally in a state penitentiary. Thus, 62% of the cases in the study population, regardless of specific charge, could be classified as felonies.

Table 50 Trial Disposition for Possession Only
Charges and Demographic Characteristics

	All Charges Dismissed	Guilty On All Charges	Not Guilty On All Charges	Guilty On At Least One And Other Disposition	Other Disposition	Disposition Unknown
Total (375)	(46) 12%	(268) 72%	(46) 12%	(6) 2%	(3) 1%	(6) 2%
Gender						
Male (338)	13%	72%	11%	2%	1%	2%
Female (37)	8	70	22	0	0	0
Age						
16 and Under (44)	5	89	0	0	0	7
17 - 18 (100)	13	77	8	1	1	0
19 - 20 (85)	8	72	17	2	1	0
21 - 22 (49)	6	65	22	2	0	4
23 - 24 (40)	20	70	10	0	0	0
25 - 26 (15)	27	40	27	0	0	7
27 - 28 (7)	29	43	14	14	0	0
29 - 30 (5)	40	60	0	0	0	0
31 + (13)	15	46	23	8	8	0
Unknown (17)	18	77	6	0	0	0
Race						
White (298)	11	74	11	2	1	2
Black (65)	19	59	20	2	2	0
Spanish-speaking (6)	0	83	17	0	0	0
Unknown (6)	17	83	0	0	0	0
Occupation						
Student (105)	5	88	5	0	0	3
Criminal (2)	0	100	0	0	0	0
Blue Collar (101)	16	59	20	3	2	0
White Collar (55)	15	62	20	0	0	4
Military (9)	0	89	0	11	0	0
Unemployed (42)	12	71	14	2	0	0
Unknown (61)	20	69	7	2	2	2
Mobility						
Transient (32)	9%	63%	22%	0%	0%	6%
Semi-Permanent (19)	16	79	5	0	0	0
Permanent (306)	11	73	12	2	1	1
Suburban (3)	67	33	0	0	0	0
Unknown (15)	27	67	7	0	0	0
Prior Investigation						
No Investigation (274)	13	71	13	2	1	1
Short-Term (69)	12	73	9	1	1	4
Intermediate (24)	8	79	8	4	0	0
Long-Term (5)	0	40	60	0	0	0
Unknown (3)	0	100	0	0	0	0
Amount Seized						
None (16)	6	81	0	6	0	6
< 1 Gram (38)	13	76	11	0	0	0
1 - 5 Grams (103)	13	70	13	4	1	0
6 - 30 Grams (107)	13	71	11	1	1	3
31 Grams + (50)	10	78	6	0	2	4
Unknown (61)	13	64	23	0	0	0

Table 51 Maximum Sentences by Offense

	Possession Of Marihuana	(829)	82%	Sale Of Marihuana	(51)	5%	Possession And Sale of Marihuana	(3)	*	Possession Of Marihuana, Other	(17)	2%	Possession Of Marihuana, Nondrug	(14)	1%	Sale Of Marihuana, Other	(1)	*	Possession Of Marihuana, Other Drug Related	(8)	1%	Other Charge	(83)	8%	Total
Total (1007)																									
<u>Maximum Sentence Under Applicable Statute Or Ordinance: (Incarceration)</u>																									
<u>Maximum</u>																									
Inapplicable **	4			6			33			18			21			0			13			6		5	
No Incarceration Permitted	*			0			0			0			0			0			0			0		*	
30 Days Or Under	5			0			0			0			7			0			0			0		4	
31 to 180 Days	2			0			0			0			0			0			0			7		2	
181 Days to One Year	28			2			0			35			21			0			75			25		27	
More than 1 Year to 2 Years	*			4			0			0			0			0			0			5		1	
More than 2 Years to 5 Years	1			8			0			0			0			0			0			10		2	
More than 5 years to 10 Years	15			12			67			24			21			0			0			11		15	
More than 10 Years	38			57			0			6			100			100			0			15		36	
Unknown	8			12			0			18			29			0			13			22		9	
* Indicates less than one percent																									
** In juvenile cases, the traditional statutory range is not applicable. Typically a juvenile can be confined to a training facility until his twenty-first birthday.																									

* Indicates less than one percent

** In juvenile cases, the traditional statutory range is not applicable. Typically a juvenile can be confined to a training facility until his twenty-first birthday.

Table 52 Sentence Assessed by Offense

Total (1007)	Possession Of Marihuana (829) 82%	Sale Of Marihuana (51) 5%	Possession And Sale Of Marihuana (3) *	Possession Of Marihuana, Possession, Other (17) 2%	Possession Of Marihuana, Sale Other (1) *	Possession Of Marihuana, Nondrug (14) 1%	Sale Of Marihuana, Sale Other (1) *	Possession Of Marihuana, Other Drug Related (8) *	Other Charge (83) 8%
Incarceration									
No Incarceration Assessed	67%	24%	33%	65%	0	64%	0	75%	48%
Unknown whether									
Incarcerated	2%	4%	0	12%	0	0	0	0	16%
Incarceration Assessed	32	73	67	24	100	35	100	26	37
Length of Sentence									
30 Days or Under	7	2	0	0	0	7	0	13	7
Over 30 Days	7	10	0	6	0	14	0	0	7
Over 6 Months	7	6	0	18	0	14	0	0	8
Over 1 Year	3	2	33	0	0	0	0	0	1
Over 2 Years	4	28	0	0	100	0	100	0	5
Over 5 Years	1	8	0	0	0	0	0	0	0
Over 10 Years	*	14	0	0	0	0	0	0	1
Life In Prison	*	2	0	0	0	0	0	0	2
Amount Unknown	2	2	33	0	0	0	0	13	4
Suspension									
None Suspended	21	57	33	12	100	21	100	13	21
All Suspended	8	8	33	12	0	7	0	13	12
Part Suspended	3	8	0	0	0	7	0	0	4
Incarceration (continued)									
Incarceration Assessed									
Amount Suspended									
30 Days or Under	1	0	0	0	0	0	0	0	1
Over 30 Days	5	2	0	0	0	14	0	0	5
Over 6 Months	4	2	0	12	0	0	0	0	6
Over 1 Year	0	4	33	0	0	0	0	0	0
Over 2 Years	0	8	0	0	0	0	0	0	1
Over 5 Years	0	0	0	0	0	0	0	0	0
Over 10 Years	0	0	0	0	0	0	0	0	0
Unknown	1	0	0	0	0	0	0	13	2
Fines									
Not Fined	83	77	67	77	100	64	100	88	54
Fined	18	24	33	24	0	35	0	13	45
Under \$100	4	0	0	6	0	14	0	0	8
\$100 To \$199	4	2	0	6	0	7	0	13	8
\$200 To \$500	4	2	0	0	0	7	0	0	11
\$500 Or Over	2	6	33	0	0	0	0	0	7
Unknown Amount	4	14	0	12	0	7	0	0	11
Probation									
No Probation	26%	53%	33%	18%	100%	29%	100%	38%	33%
Unknown whether									
Probation	4	8	0	12	0	0	0	0	7
Yes, Probation	70	46	67	71	0	71	0	63	61
Under 6 Months	2	0	0	0	0	7	0	0	1
6 Months to 1 Year	5	4	0	6	0	0	0	25	1
1 To 2 Years	12	8	33	0	0	7	0	13	15
2 To 3 Years	14	16	0	12	0	7	0	0	16
Over 3 Years	11	2	0	6	0	7	0	0	4
Unknown Amount	26	10	33	47	0	43	0	25	24

*Indicates less than one percent

possession of other drugs, or both. Specific offenses are also associated with variations in the length of sentence assessed.

In regard to those convicted of possession of marihuana only, two-thirds (67%) were not sentenced to any period of incarceration. An additional 8% of these defendants were sentenced to a period of incarceration but the sentence was suspended in full. Thus three-fourths of those defendants convicted of possession alone were not incarcerated. Conversely, one fourth of these defendants (24%) were incarcerated, although the sentence was partly suspended in 3% of the cases.

Of the possession only defendants receiving no actual period of incarceration, about 5% were fined and the rest were put on probation. Of the possession only defendants who were sentenced to incarceration, about equal proportions were assessed 30 days or under, between 31 and 180 days, and between six months and a year. Three persons were sentenced to more than ten years and two persons were sentenced to life in prison.

The data in Table 52 also show the sentences for defendants convicted of sale of marihuana only. Compared to possession defendants, those found guilty of sale were unlikely to escape incarceration (32% compared to 75%). Twenty-four percent of these defendants were sentenced to no period of incarceration and an additional 8% were sentenced to jail but their sentences were fully suspended. Conversely, about two-thirds (65%) of these defendants were sentenced to some time in prison, although the sentence was partially suspended in 8% of these cases. Among those convicted of sale of marihuana, seven persons were sentenced to more than ten years, and one person was sentenced to life in prison.

Sentencing for Possession of Marihuana. Tables 53 through 56 present more detailed data concerning the sentencing of defendants convicted of possession of marihuana only. Table 53 indicates that lighter (misdemeanor) sentences were more likely to be suspended and to be accompanied by a fine than harsher (felony) sentences. No felony sentence was either suspended or joined by a fine. The data in Tables 54-56 permit comparison of defendants found guilty of the identical charge (possession of marihuana), but who differ in various demographic characteristics.

Table 54 pertains to amount of incarceration assessed. The data indicate that gender, race, age and occupation are associated with certain sentencing variations. In regard to gender, incarceration was assessed more often for males (33%) than females (26%). In regard to age, the data indicate that with increasing age, both the probability of incarceration and the length of incarceration increase.

The data show, for example, that incarceration was least likely in the case of persons 18 and under (4% and 21%) and most likely in the case of persons 31 and over (56%). About a third of the persons in the intervening age groups were sentenced to incarceration. The data suggest that these broad age groupings are also associated with increasing length of sentences, with persons under 22 receiving less time than older persons.

In regard to race, the data indicate that incarceration was assessed more often in the case of blacks (39%) than whites (28%). Incarceration for a year or less was about equally uncommon for blacks (24%) and whites (21%), but incarceration for over one year was more common among blacks (15%) than whites (7%).

Occupational groups also differ in regard to sentences assessed. Among persons found guilty of marihuana possession, incarceration was assessed somewhat less often for students (20%) and white collar workers (30%) than for blue collar workers (32%). Sentences for one year or less were somewhat more common among blue collar workers (25%) than among white collar workers (20%) or students (16%). Sentences for a year or more were somewhat more common among blue collar workers (7%) and white collar workers (8%) than among students (4%).

Table 55 presents data concerning fines assessed for persons found guilty of marihuana possession. The data indicate that neither the incidence nor the amount of fines is systematically associated with gender, age, race or occupation. In each case, the small differences that occur may be attributed to fluctuations in sample size.

Table 56 presents data concerning probation of defendants found guilty of marihuana possession. The data indicate that probation was granted to about 70% of these defendants (24% were incarcerated, and about 4% were fined). Where the length of the probationary period was known, it was generally over a year. The data indicate that the granting of probation also varies somewhat by age, gender, race and occupation, paralleling the data regarding incarceration. In regard to gender, probation was granted more often to females (78%) than to males (69%). In regard to age, probation was granted somewhat more often to younger defendants than to older ones. Probation was granted more often to defendants 20 and under (between 76% and 81% received probation) than to defendants 20 to 26 (between 65% and 71% received probation) or defendants 31 and older (45% received probation).

In regard to race and occupation, probation was granted somewhat more often to white defendants (71%) than to black defendants (65%), and more

Table 53 Sentence Assessed and Sentence
Suspended for Possession Only
Charges

	30 Days Or Under	(60) 7%	(60) 7%	Over 30 Days, Not Over 6 Months	Over 6 Months, Not Over 1 Year	Over 1 Year, Not Over 2 Years	Over 2 Years, Not Over 5 Years	Over Five Years, Not Over 10 Years	(10) 1%	(3) *	(2) *	Life Imprisonment	Incarcerated But Amount Unknown
Total (829)													
Sentence Suspended													
30 Days Or Under	18%												
Over 30 Days, Under 6 Months	0	58	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Over 6 Months, Under 1 Year	0	0	0	63	0	0	0	0	0	0	0	0	0
Over 1 Year, Under 2 Years	0	0	0	0	0	0	0	0	0	0	0	0	0
Over 2 Years, Under 5 Years	0	0	0	0	0	0	0	0	0	0	0	0	0
Over 5 Years, Under 10 Years	0	0	0	0	0	0	0	0	0	0	0	0	0
Over 10 Years	0	0	0	0	0	0	0	0	0	0	0	0	0
Sentence-Susp., Amount Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0
No Suspended Sentence	82	42	100	30	100	100	100	100	100	100	100	100	100
Fine													
No Fine	80	63	100	78	100	100	100	100	100	100	100	100	88
Under \$100.	7	2	0	0	0	0	0	0	0	0	0	0	0
\$100. To \$199.	10	8	0	2	0	0	0	0	0	0	0	0	0
\$200. To \$500.	2	10	0	0	0	0	0	0	0	0	0	0	6
\$500. Or Over	0	7	0	6	0	0	0	0	0	0	0	0	0
Unknown	2	10	0	15	0	0	0	0	0	0	0	0	6

Table 54 Sentencing for Possession Only
and Demographic Characteristics:
Incarceration

	30 Days Or Under	30 Days To 6 Months	6 Months To One Year	1 Year	2 - 5 Years	5 - 10 Years	Over 10 Years	Life In Prison	Incarceration Sentence Suspended	No Incarceration
	(60) %	(60) %	(54) %	(26) %	(31) %	(10) %	(3) %	(2) %	(17) %	(566) %
Gender										
Male (747)	8%	8%	7%	3%	4%	1%	*%	*%	2%	68%
Female (82)	4	5	2	7	4	0	0	0	2	76
Age										
16 and Under (44)	2	2	0	0	0	0	0	0	14	82
17 - 18 (173)	5	5	6	2	2	0	1	0	4	76
19 - 20 (217)	12	9	6	2	1	1	0	0	1	68
21 - 22 (145)	4	7	10	3	3	1	0	0	1	70
23 - 24 (106)	6	10	9	3	7	0	0	1	1	64
25 - 26 (41)	5	10	2	5	7	2	2	0	2	63
27 - 28 (18)	6	0	11	6	6	6	0	0	0	67
29 - 30 (17)	12	6	0	24	6	0	0	0	0	53
31 - Over (47)	9	6	9	9	15	4	2	2	0	45
Unknown (21)	10	5	5	0	5	10	0	0	0	67
Race										
White (656)	7	7	7	3	3	1	*	*	2	70
Black (153)	11	9	4	5	7	1	1	1	2	60
Spanish-speaking (14)	0	7	0	7	0	0	0	0	0	86
Unknown (6)	0	0	0	0	0	0	0	0	0	100
Occupation										
Student (178)	4	5	7	1	2	1	0	0	6	74
Criminal (5)	20	0	0	0	20	0	0	20	0	40
Blue Collar (252)	10	9	6	2	3	1	1	0	1	67
White Collar (141)	9	6	7	1	5	2	0	0	0	70
Military (28)	14	11	18	4	0	0	0	0	4	50
Unemployed (103)	8	11	4	7	2	1	1	1	2	64
Unknown (122)	2	5	6	7	9	3	0	0	0	70

Table 55 Sentencing for Possession Only
and Demographic Characteristics:
Fines

	Under \$100.	\$100. To \$199.	\$200. To \$500.	\$500. Or More	No Fine	Amount Unknown
Total (829)	(35) 4%	(30) 4%	(32) 4%	(16) 2%	(685) 83%	(31) 4%
Gender						
Male (747)	4%	4%	4%	2%	82%	4%
Female (82)	2	1	0	1	92	4
Age						
Under 16 (44)	0	0	0	0	93	7
17 - 18 (173)	4	2	2	3	86	4
19 - 20 (217)	5	4	4	1	82	5
21 - 22 (145)	6	3	4	3	80	3
23 - 24 (106)	5	8	5	1	78	4
25 - 26 (41)	2	2	7	5	81	2
27 - 28 (18)	6	6	0	0	89	0
29 - 30 (17)	0	0	6	0	94	0
31 + (47)	2	6	6	6	79	0
Unknown (21)	5	5	10	0	76	5
Race						
White (656)	4	3	5	2	81	4
Black (153)	5	3	1	1	88	3
Spanish-speaking (14)	0	14	0	0	86	0
Unknown (6)	0	17	0	0	83	0
Occupation						
Student (178)	1	3	2	2	84	7
Criminal (5)	0	20	0	0	80	0
Blue Collar (252)	6	5	5	3	79	4
White Collar (141)	6	1	4	3	84	1
Military (28)	7	7	7	0	75	4
Unemployed (103)	3	2	3	1	88	3
Unknown (122)	5	4	4	0	84	3

often to students (77%), unemployed persons (74%) and blue collar workers (72%) than to white collar workers (65%).

CRIMINAL PROCESS AND TIME

The length of time from arrest to final disposition is a crude indicator of the efficiency with

which marihuana arrestees are processed. Of the more than 3,000 arrestees in the study population, two-thirds (66%) were processed to completion within three months of arrest. About eight in ten arrestees (85%) were processed within six months after arrest.

Table 56 Sentencing for Possession Only
and Demographic Characteristics:
Probation

	Under 6 Months (18) 2%	6 Months to 1 Year (37) 5%	1 Year to 2 Years (103) 12%	2 Years to 3 Years (118) 14%	Over 3 Years (88) 11%	Unknown Amount (217) 26%	No Probation (217) 26%	Unknown Whether Probation (31) 4%
Total (829)								
Gender								
Male (747)	2%	4%	12%	14%	10%	26%	27%	4%
Female (82)	1	6	12	13	16	29	21	1
Age								
16 and Under (44)	0	2	0	0	0	80	14	5
17 - 18 (173)	2	10	12	18	9	25	21	4
19 - 20 (217)	3	4	12	19	11	27	22	2
21 - 22 (145)	3	3	15	9	15	25	26	4
23 - 24 (106)	2	2	19	10	14	18	30	5
25 - 26 (41)	2	2	10	15	12	29	27	2
27 - 28 (18)	0	6	17	17	0	22	39	0
29 - 30 (17)	0	0	12	29	12	0	47	0
31 + (47)	2	2	6	13	11	11	53	2
Unknown (21)	0	0	19	5	5	24	29	19
Race								
White (656)	3	5	12	15	10	27	25	4
Black (153)	0	4	13	12	12	24	33	2
Spanish-speaking (14)	0	0	21	21	14	29	14	0
Unknown (6)	0	0	67	0	0	17	17	0
Occupation								
Student (178)	2	7	9	14	5	41	16	7
Criminal (5)	0	0	20	0	0	40	40	0
Blue Collar (252)	3	4	12	15	11	28	26	2
White Collar (141)	1	4	11	17	16	16	31	4
Military (28)	0	4	21	7	4	11	46	7
Unemployed (103)	4	6	14	14	17	20	24	2
Unknown (122)	2	2	18	14	9	21	33	3

The data in Table 57 indicate that length of time, predictably, is associated with the kind of disposition made. For example, among cases terminated, length of time increases with each subsequent phase. Terminations at the arrest and charge phases always occurred within 30 days after apprehension, and termination at the complaint phase occurred later in only 1% of the cases. By contrast, final disposition within 30 days was less common in cases terminated at the initial judicial phase (59%), the subsequent pretrial phase (14%) or the trial phase (12%).

Table 58 shows that certain demographic variables are associated with time. The data indicate that dispositions were made more quickly for defendants who were female, under 16, white, students and who had no prior drug arrests. Final dispositions within 30 days after arrest were more common among females (45%) than males (34%), among persons 16 and under (69%) than older persons (overall, 36%), among white (38%) than black (27%) arrestees, among students (49%) than blue collar (27%) or white collar (27%) arrestees, and among arrestees with no prior drug arrests (37%) than persons with prior records (16% to 30%).

Conversely, final dispositions four or more months after arrest occurred more often among arrestees 29 to 30 (36%) than among other age groups (overall, 19%), and among blue collar (25%) and white collar (22%) workers than among students (11%).

Table 59 presents time data for all adult arrestees initially charged with possession of marihuana only. Neither gender nor race is systematically associated with time. The data do indicate, however, that persons 29 and over spend more time in the criminal process. Proportionately more dispositions were made four or more months after arrest among persons 29 to 30 (32%) and 31 and over (29%) than among younger persons (overall, 20%). With regard to occupation, the data indicate that students spent somewhat more time in the criminal process than did employed or unemployed persons. Final dispositions within 30 days after arrest, were made more often for white collar

(28%) and blue collar (26%) workers and unemployed persons (26%) than among students (20%).

Prior drug record also is associated with disposition time among adult arrestees initially charged with marihuana possession. Persons with no prior drug arrests and persons with nonmarihuana drug arrests were processed earlier than were persons with prior marihuana arrests. More dispositions were made within 30 days after arrest among persons with no prior drug arrests (29%) and persons with nonmarihuana drug arrests (29%) than among persons with prior arrests for marihuana only (15%) or marihuana and another drug offense (10%).

Table 60 shows jurisdictional variation in disposition time. The data indicate that marihuana cases generally were processed more quickly in Washington, D.C. and Tucson and more slowly in Chicago. Final disposition within 30 days of arrest occurred more often in Washington, D.C. (52%) and Tucson (46%) than in other jurisdictions (overall, 36%). In Chicago, 9% of the cases were processed within 30 days of arrest.

Final disposition within one to three months after arrest was more common in Chicago (44%) than in other jurisdictions (overall, 30%). Final disposition four or more months after arrest was somewhat more common in Chicago (26%) and Dallas (24%) than in other jurisdictions (19%).

Table 60 also indicates that jurisdictions differ in the proportion of cases that were pending at the time of data collection. Pending cases were more common in Tucson (18%) and Chicago (17%) than in other jurisdictions (overall, 8%).

To summarize, the data indicate that a substantial proportion of marihuana cases (85%) were processed within 6 months after arrest. Two-thirds (66%) of the cases were processed within three months after arrest. Cases that were terminated spent less time in the criminal process than cases resulting in guilty pleas or going to trial. Among adults initially charged with marihuana possession, dispositions were made more quickly for females, persons under 29, students and persons with no prior drug arrest records.

Table 57 Length of Time From Arrest to Final Disposition by Terminations and Other Dispositions

	Less Than One Month	1 - 3 Months	4 Or More Months	No Final Disposition	Unknown
Total (3071)	(1091) 36%	(911) 30%	(574) 19%	(230) 8%	(265) 9%

Case Terminated At-

Arrest Phase (150)	88%	0%	0%	1%	11%
Charge Phase (231)	96	0	0	2	2
Complaint Phase (163)	99	0	1	1	0
Initial Judicial (81)	59	12	7	0	21
Subsequent Pretrial Phase (619)	14	49	26	1	11
Pretrial-Juvenile (276)	83	12	1	1	3
Trial Phase (69)	12	71	17	0	0

Other Dispositions-

Guilty By Plea (624)	11	44	41	0	4
Guilty By Trial (385)	17	49	28	1	5
Not Guilty (53)	21	43	25	0	11
Other Trial Dispositions (8)	0	50	38	13	0
Pending (343) *	16	7	3	60	15
Unknown (69)	16	7	0	7	70

*Theoretically, all pending cases should be in the cell marked "No Final Disposition." However in a number of cases, a "pending" status was itself a disposition, operating as an informal diversion. For example, a significant number of cases in Maryland were placed on a "hold" docket, and, for purposes of the study, disappeared from view.

Table 58 Length of Time from Arrest to Final Disposition
for all Arrestees by Demographic Characteristics

	Less Than 1 Month	1 - 3 Months	4 Or More Months	No Final Disposition	Unknown
Total (3071)	36%	30%	19%	8%	9%
Gender					
Males (2622)	34%	30%	20%	8%	9%
Females (446)	45	27	14	7	8
Age					
16 and Under (313)	69	18	4	5	4
17 - 18 (734)	42	28	14	7	10
19 - 20 (721)	31	32	21	7	9
21 - 22 (468)	27	34	24	8	8
23 - 24 (303)	25	35	24	7	9
25 - 26 (141)	26	33	25	8	9
27 - 28 (85)	24	41	19	8	8
29 - 30 (61)	25	15	36	20	5
31 + (166)	26	29	28	9	8
Unknown (79)	35	22	11	11	20
Race					
Whites (2350)	38	29	18	7	9
Blacks (623)	27	32	24	9	7
Spanish-speaking (73)	32	34	11	16	7
Unknown (16)	31	19	19	0	31
Occupation					
Student (828)	49	27	11	7	6
Criminal (23)	35	22	17	17	9
Blue Collar (856)	27	34	25	7	7
White Collar (461)	27	35	22	7	10
Military (69)	46	36	15	0	3
Unemployed (349)	27	30	23	9	12
Unknown (485)	41	23	15	8	13
Prior Contact					
No Prior Drug Arrest (2621)	37	30	18	7	9
Marihuana Only (152)	22	32	19	20	6
Other Drugs Without Marihuana (187)	30	28	25	12	6
Marihuana With Other Drugs (55)	16	35	33	11	6
Unknown (56)	41	25	25	2	7

**Table 59 Length of Time From Arrest To Final Disposition For
All Adults Charged with Possession of Marihuana**

	Less Than 1 Month	1 - 3 Months	4 Or More Months	No Final Disposition	Unknown
Total (1541)	28%	35%	20%	7%	10%
Gender					
Males (1363)	27%	35%	21%	7%	10%
Females (176)	34	33	18	6	10
Age					
16 and Under (1)	0	100	0	0	0
17 - 18 (351)	28	37	17	8	11
19 - 20 (442)	32	34	20	6	10
21 - 22 (278)	27	34	23	7	9
23 - 24 (184)	24	40	20	6	10
25 - 26 (80)	25	39	21	8	8
27 - 28 (43)	23	40	23	9	5
29 - 30 (38)	26	18	32	18	5
31 + (82)	29	27	29	6	9
Unknown (42)	24	24	10	10	33
Race					
White (1142)	29	34	20	7	10
Black (342)	25	38	22	7	8
Spanish-speaking (41)	27	42	12	15	5
Unknown (11)	27	18	18	0	36
Occupation					
Student (249)	20	42	21	10	8
Criminal (11)	36	27	18	9	9
Blue Collar (510)	26	37	23	7	8
White Collar (274)	28	34	20	6	11
Military (36)	44	36	14	0	6
Unemployed (199)	26	32	23	9	11
Unknown (262)	38	27	14	6	15
Prior Contact					
No Prior Drug Arrest (1312)	29	35	20	6	11
Marihuana Only (79)	15	41	19	18	8
Other Drugs Without Marihuana (103)	29	30	25	12	4
Marihuana With Other (21)	10	43	33	5	10
Unknown (26)	46	27	19	0	8

**Table 60 Length of Time From Arrest To Final Disposition
For All Arrestees By Jurisdiction**

	Less Than 1 Month	1 - 3 Months	4 Or More Months	No Final Disposition	Unknown
Total (3071)	36%	30%	19%	8%	9%
Dallas (850)	35	21	24	8	12
Cook County (502)	33	32	16	6	13
Maryland (404)	43	28	18	4	8
Washington, D.C. (390)	52	30	12	2	4
Chicago (362)	9	44	26	17	4
Virginia (165)	39	38	11	6	7
San Mateo (140)	39	39	19	2	0
Omaha (113)	43	31	7	10	10
Tucson (127)	46	14	10	18	12
Rural Virginia (18)	0	44	50	0	6

CONCLUSION

The findings of this study indicate that many of the traditional assumptions and assertions about the enforcement of marihuana statutes are either erroneous or only partly accurate. These findings pertain to the demographic characteristics of marihuana arrestees, the circumstances of their detection and arrest, and the manner in which their marihuana cases are processed through the criminal justice system.

The Arrestees. The general demographic profile of the marihuana arrestee in this study is a young, white, single male who is a permanent resident of his jurisdiction and is either employed as a blue collar worker or is attending school. The data do not confirm previous speculation that persons who are black, Mexican-American, transient, and unemployed are overrepresented in the arrest population. Perhaps the most significant demographic characteristic of marihuana arrestees is their age. Of the more than 3,000 arrestees in the study population, only 5% were 31 or older.

These marihuana arrestees generally had no contact with law enforcement agencies prior to the marihuana arrest. The data suggest that the marihuana arrest constituted the initial experience with the criminal justice system, particularly among juveniles.

Circumstances of Detection and Arrest. About two-thirds of the arrestees in the study population were arrested spontaneously without any prior investigative activity. Spontaneous arrests were particularly common in the case of persons under 20, black, in school, or in a blue collar job, without prior criminal involvement. When marihuana arrests were preceded by drug or drug-related investigations, the investigations were usually short term and were directed toward marihuana rather than other drugs.

The marihuana-behavior precipitating the arrest was almost always possession. Ninety-four percent of all the arrests involved the seizure of marihuana from the possession or presence of an individual or group of individuals. In the remaining 6% of the cases, the arrests were precipitated by undercover purchases of the drug. Seizures at the time of arrest generally involved less than one ounce of marihuana; seizures of more than one ounce were documented in but 15% of all cases.

Similarly, the undercover purchases ordinarily involved an ounce or less.

Nearly all marihuana arrests were made by local officers. About two-thirds of the arrests occurred in outdoor public areas or in vehicles. Nearly all of the outdoor arrests were based on "simultaneous" offenses, where no investigative activity preceded the arrest. The reason most commonly reported for outdoor searches was "suspicious behavior" and the reason most often designated for vehicle stops was "suspicious circumstances." About two-thirds of all marihuana arrests involved the simultaneous arrest of two or more persons.

Most marihuana arrests did not involve the use of arrest or search warrants. Even among indoor arrests, over one-third were accomplished without search warrants, and this was particularly so in the case of very young arrestees.

The findings pertaining to circumstances of arrest suggest that substantial proportions of marihuana arrests are a consequence of fortuitous contacts with law enforcement officers: many arrests are made without investigative activity by the police, involve small amounts of marihuana and occur among persons with no prior criminal involvement and no present indication of major involvement with drugs.

Post Arrest Disposition. Three of every five closed cases were disposed of in the defendants' favor at some point between apprehension and formal trial. About 80% of juveniles and about half of the adults were "terminated" prior to trial. About one-third of the arrestees were sentenced after pleading guilty or being found guilty at trial. Two percent of the adults, and none of the juveniles, were found not guilty at trial.

The study jurisdictions differed in the proportion of cases terminated. Terminations prior to trial were most common in Washington, D.C., where 71% of the adults and 95% of the juveniles were either dismissed or released. Adult terminations were least common in Northern Virginia and San Mateo County, California (27%). Juvenile terminations were least common in Dallas (42%) and Northern Virginia (51%).

Nearly all adults, but less than half of juveniles were taken into custody after apprehension.

Nearly all adults arrested for marihuana offenses were also charged with those offenses. The specific offenses most often charged pertain to possession of marihuana. Of the adults charged, about 90% involved at least one possession of marihuana charge and three-fifths of the adults were charged *only* with possession of marihuana. About 6% of the adults were charged with sale of marihuana.

Among juveniles, arresting officers recommended that a petition be filed in more than two-thirds of the cases. Despite, this, however, the appropriate authority chose not to do so for one case in four. Of the delinquency petitions filed, about 60% designated possession of marihuana as the reason for issuance of the petition. One-third of the juvenile petitions were dismissed after filing.

Among adults, about one in four arrestees was released on bail. Defendants were released on bail more often when the charge involved possession and less often when the charge involved sale of marihuana. The amount of bail set for most de-

fendants was between \$500 and \$1,000, and the amount of bail set was ordinarily higher for sale charges than for possession charges.

Of the more than 3,000 arrestees in the study population, 20% pleaded guilty and 17% went to the trial phase. Of the defendants reaching the trial phase, three-fourths were charged with possession of marihuana only.

Of all the persons initially arrested, 32% were sentenced. Four-fifths of these persons were convicted of possession of marihuana only, and 6% were convicted of sale offenses.

Sentences assessed varied by offense and jurisdiction. Incarceration was more often assessed to persons convicted of sale of marihuana or sale of other drugs than those convicted of possession of marihuana or possession of other drugs. Among persons convicted of possession of marihuana, about three-fourths were not incarcerated. Persons incarcerated for possession generally received sentences of one year or less.

Appendix A

MARIHUANA LAW ENFORCEMENT SURVEY

Schedule # _____

Cross References: _____
(By Schedule #)

Researcher _____
First name Last name

Same arrestee

Date Form Completed _____
Mo. Day Yr.

Same charge: _____

Other charges: _____

Same arrest group

Same investigation

Files Used:

<input type="checkbox"/>	Police File	(P)
<input type="checkbox"/>	Prosecution File	(DA)
<input type="checkbox"/>	Grand Jury File	(GJ)
<input type="checkbox"/>	Court* File _____	(C-1)
<input type="checkbox"/>	Court* File _____	(C-2)
<input type="checkbox"/>	Probation Department File	(Pro)
<input type="checkbox"/>	Social Service Agency File	(SS)
<input type="checkbox"/>	Bail Agency File	(B)
<input type="checkbox"/>	Other	(X)

* If more than one court file is involved, identify them and abbreviate them C-1 and C-2.

I CASE IDENTIFICATION

- A. State _____
- B. City or County _____
- C. Court _____
- Adult ☐ Juvenile ☐
- D. File Number in Police Records _____
- _____
- E. File Number in Prosecution Records _____
- _____
- F. File Number in Court Records _____
- _____
- G. Current Status of Case
- ☐ Closed
- ☐ Pending; Specify status _____

II THE ARRESTEE

- A. NAME _____
- First Middle Last
- B. Date of Birth _____ Unknown ☐
- Source P DA GJ C-1 C-2 Pro SS B X _____
- C. Sex Male ☐ Female ☐
- Source P DA GJ C-1 C-2 Pro SS B X _____
- D. Family
1. Marital Status at time of offense
- ☐ Single ☐ Separated
- ☐ Married ☐ Widowed
- ☐ Married, common law ☐ Unknown
- ☐ Divorced ☐ Other Specify _____
- Source P DA GJ C-1 C-2 Pro SS B X _____

2. Number of defendant's children living in his household at time of offense

No children ☐ Children ☐ Number: Unknown ☐

Source P DA GJ C-1 C-2 Pro SS B X

E. Ethnic Characteristics

☐ White ☐ Unknown
☐ Black ☐ Other Specify
☐ American Indian
☐ Spanish-speaking

Source P DA GJ C-1 C-2 Pro SS B X

F. Mobility

Arrestee's presence in this jurisdiction ☐ suburban
☐ is transient ☐ is permanent
☐ is semi-permanent (eg college student, military) ☐ Unknown

Source P DA GJ C-1 C-2 Pro SS B X

G. Is there anything in the files which suggests that any participant in the criminal justice process thought that arrestee was a "hippie".

Yes ☐ No ☐ Explain

Source P DA GJ C-1 C-2 Pro SS B X

H. Occupation:

1. Defendant's occupation at time of offense

<input type="checkbox"/> Student	<input type="checkbox"/> Personal service
<input type="checkbox"/> Criminal employment	<input type="checkbox"/> skilled
<input type="checkbox"/> Factory labor	<input type="checkbox"/> semi-skilled
<input type="checkbox"/> skilled	<input type="checkbox"/> unskilled
<input type="checkbox"/> semi-skilled	<input type="checkbox"/> Sales
<input type="checkbox"/> unskilled	<input type="checkbox"/> Clerical
<input type="checkbox"/> Construction labor	<input type="checkbox"/> Artisan; craftsman
<input type="checkbox"/> skilled	<input type="checkbox"/> Military
<input type="checkbox"/> semi-skilled	<input type="checkbox"/> Musician; entertainer
<input type="checkbox"/> unskilled	<input type="checkbox"/> Managerial; proprietary
<input type="checkbox"/> Other labor	<input type="checkbox"/> Professional
<input type="checkbox"/> skilled	<input type="checkbox"/> Trained; technical; white collar
<input type="checkbox"/> semi-skilled	<input type="checkbox"/> None
<input type="checkbox"/> unskilled	<input type="checkbox"/> Unknown
<input type="checkbox"/> Farm labor	

Source P DA GJ C-1 C-2 Pro SS B X

2. Was defendant employed at time of offense?

Employed ☐ Unemployed ☐ Employed on Part-time basis ☐ Unknown ☐
 Source P DA CJ C-1 C-2 Pro SS B X _____

I. Educational background

1. Year completed at time of offense unknown ☐
 6 7 8 9 10 11 12 13 14
 15 16 17 18 19 20 over 20

Source P DA GJ C-1 C-2 Pro SS B X _____

2. Was arrestee enrolled as a student at time of offense

Yes ☐

☐ Elementary School (Grades 1-6)
☐ Junior high (Grades 7-9)
☐ High school (Grades 10 - 12)
☐ Post-high school vocational training
☐ Part-time college (undergraduate)
☐ Full-time college (undergraduate)
☐ Part-time graduate school
☐ Full-time graduate school
☐ Unknown
 No ☐ Unknown ☐

Source P DA GJ C-1 C-2 Pro SS B X _____

J. History of Drug Use (if available)

<input type="checkbox"/> unknown	<input type="checkbox"/> has used heroin
<input type="checkbox"/> marihuana user for _____ years (circle one) 1 2 3 4 5 more than 5	<input type="checkbox"/> is dependent on heroin specify how long _____
<input type="checkbox"/> has used LSD	<input type="checkbox"/> has used cocaine
<input type="checkbox"/> has used amphetamines	<input type="checkbox"/> has used alcohol

II K

1. Did arrestee have prior arrest record?

Yes ☐ No ☐ Unknown ☐

2. If yes:

a. Number of drug-related arrests (circle one)

unknown 1 2 3 4 5 over 5

b. Number of non-drug-related arrests (circle one)

unknown 1 2 3 4 5 over 5

**c. Identification of five most recent arrests
(from Code A)**

1. _____

2. _____

3. _____

4. _____

5. _____

d. Number of prior drug-related convictions (circle one)

unknown 1 2 3 4 5 over 5

e. Number of prior non-drug-related convictions (circle one)

unknown 1 2 3 4 5 over 5

f. Has arrestee ever been incarcerated for any offense?

Yes ☐ No ☐ Unknown ☐

III CIRCUMSTANCES OF DETECTION AND ARREST

A. Was there a prior drug-related investigation leading to arrest?

Yes ☐ No ☐ Unknown ☐

Source P DA GJ C-1 C-2 Pro SS B X _____

B. If there was prior drug-related investigation:

1. General Scope of Investigation

☐ Short-term, (e.g. focused on few people, primarily to verify evidence supplied by independent source, not characterized by any police-supervised "buys")

☐ Intermediate (characterized by some police-initiated evidence gathering, but not substantial and focused on few people for short time)

☐ Long-term (initiated by police primarily to accumulate new evidence, focused on major trafficking apparatus for substantial period of time)

☐ Unknown

2. Object of investigation (more than one may apply)

☐ Marihuana alone

☐ Other contraband
Specify _____

☐ Other drugs, not including marihuana

☐ Other
Specify _____

☐ All drugs including marihuana

☐ Unknown

Source P DA GJ C-1 C-2 Pro SS B X _____

3. Source of information leading immediately to investigation/arrest of this arrestee

☐ Informant ("reliable source," or "confidential informant")

☐ Independent complaint

☐ Professional informant

☐ Internal police information

☐ Arrestee informant

☐ Undercover police activity

☐ Other informant

☐ Other
Specify _____

☐ Unknown

☐ Unknown

Source P DA GJ C-1 C-2 Pro SS B X _____

4. Was undercover agent utilized?

☐ Yes ☐ No ☐ Unknown

If yes, for how long prior to arrest? _____

5. Was electronic surveillance utilized?

☐ Yes ☐ No ☐ Unknown

6. Were any "buys" from this arrestee made prior to arrest?

☐ Yes ☐ No ☐ Unknown

If yes, specify:

Date Mo./Day/Year	Drug	Amount
/ /		
/ /		
/ /		

Source P DA GJ C-1 C-2 Pro SS B X _____

C. Date of arrest: Mo. Day Yr.

☐ Known: _____

☐ Unknown

Source P DA GJ C-1 C-2 Pro SS B X _____

D. Geographical location of arrest

Address _____

Zip Code _____

Census tract _____

Unknown ☐

Source P DA GJ C-1 C-2 Pro SS B X _____

E. Identification of Arresting Officer(s)

1. Name or badge number if readily available _____

2. Jurisdictional characteristics: _____

☐ Local (Municipal or County) Police - General Jurisdiction

☐ / Narcotics squad or vice squad (specialized personnel)

☐ General patrolman

☐ General detective

☐ Juvenile Officer

☐ State Police - General Jurisdiction

☐ Highway patrol - state trooper

☐ General Investigative Unit

☐ Federal agencies (referral to state)

☐ BNDD

☐ Customs

☐ I. N. S.

☐ Officers with limited jurisdiction

☐ Park Police

☐ University Police

☐ Private Security

☐ Other specify _____

Source P DA GJ C-1 C-2 Pro SS B X _____

F. Physical Location of Arrest

- ☐ Indoors
- ☐ single family private residence (apartment or house)
owned by defendant or family
- ☐ single family private residence (apartment or house)
owned by someone other than defendant
- ☐ multiple occupant private residence (e.g. fraternity
house, communal arrangement, etc.)
specify _____
- ☐ Other building Specify _____
- ☐ Motor Vehicle
- ☐ Outdoors
- ☐ street
- ☐ other outdoor public area
- ☐ Indoor Public Area
- ☐ Self Surrender
- ☐ Other
- ☐ Unknown

Source P DA GJ C-1 C-2 Pro SS B X _____

G. If arrest was in motor vehicle

1. Was motor vehicle seized?

Yes ☐ No ☐ Unknown ☐

Source P DA GJ C-1 C-2 Pro SS B X _____

2. What was cause for stopping motor vehicle? (more than one may
apply)

- | | |
|--|---|
| <input type="checkbox"/> Speeding | <input type="checkbox"/> Officer had search warrant |
| <input type="checkbox"/> Running red light | <input type="checkbox"/> Suspected faulty inspection
sticker |
| <input type="checkbox"/> Reckless driving | <input type="checkbox"/> Illegal lane change |
| <input type="checkbox"/> Suspicious circumstances | <input type="checkbox"/> Faulty lights |
| <input type="checkbox"/> Officer had arrest warrant | <input type="checkbox"/> Incorrect turn |
| <input type="checkbox"/> Routine traffic stop (spot check) | <input type="checkbox"/> Unknown |
| | <input type="checkbox"/> Other |

Source P DA GJ C-1 C-2 Pro SS B X _____

3. What was cause or causes for marihuana arrest? (More than one may be applicable)

- ☐ Officer saw suspicious container ☐ Subject searched incident to arrest
- ☐ Officer smelled marihuana ☐ Officer had search warrant
- ☐ Officer saw marihuana ☐ Officer had arrest warrant
- ☐ Occupant made furtive gesture (e.g. throwing something away) ☐ Officer saw drug paraphrenalia
- ☐ Other Specify _____
- ☐ Subject appeared "intoxicated" ☐ Unknown

Source P DA GJ C-1 C-2 Pro SS B X _____

H. If arrest was indoors:

1. Was arrest warrant utilized?

Yes ☐ No ☐ Unknown ☐

If yes, did it describe

☐ prior drug offense ☐ present offense

☐ prior non-drug offense ☐ unknown

Source P DA GJ C-1 C-2 Pro SS B X _____

2. Was search warrant utilized?

Yes ☐ No ☐ Unknown ☐

If yes, did it describe

☐ "narcotic drugs" or similar general language

☐ other drugs

☐ marihuana

☐ specified but unknown drugs

☐ LSD

☐ other related contraband

☐ cocaine

☐ other un-related contraband Specify _____

☐ heroin

☐ Unknown

☐ amphetamines

☐ hashish

Source P DA GJ C-1 C-2 Pro SS B X _____

3. What was cause of police presence?

- | | |
|---|--|
| <input type="checkbox"/> Prior long-term investigation | <input type="checkbox"/> Investigation of unrelated complaint |
| <input type="checkbox"/> Prior intermediate drug investigation | <input type="checkbox"/> Altercation |
| <input type="checkbox"/> Short-term investigation of drug complaint | <input type="checkbox"/> Card party |
| <input type="checkbox"/> Drug-related investigation of unknown duration | <input type="checkbox"/> Suspected burglary or breaking and entering |
| | <input type="checkbox"/> Trespassing |
| | <input type="checkbox"/> Other |

Source P DA GJ C-1 C-2 Pro SS B X _____

I. If arrest was outdoors

1. Was arrest based on:

- ☐ prior offense
☐ drug offense
☐ non-drug offense
- ☐ simultaneous offense
☐ drug offense
☐ non-drug offense
- ☐ both

2. If based on prior offense, did officer have arrest warrant specifying prior offense?

Yes ☐ No ☐ Unknown ☐

3. If based at all on simultaneous offense, what was (were) recorded cause(s) for marihuana arrest?

- | | |
|--|--|
| <input type="checkbox"/> Searched in connection with questioning for a suspected curfew violation | <input type="checkbox"/> Searched because officer saw drug paraphernalia |
| <input type="checkbox"/> Searched in connection with a suspected loitering offense | <input type="checkbox"/> Searched because officer has prior information regarding drug offense |
| <input type="checkbox"/> Searched in connection with a suspected vagrancy offense | <input type="checkbox"/> Suspicious appearance caused officer to search |
| <input type="checkbox"/> Searched because officer smelled marihuana | <input type="checkbox"/> Officer saw marihuana |
| <input type="checkbox"/> Officer had arrest warrant authorizing a search incident to its execution | <input type="checkbox"/> Officer bought marihuana from arrestee |
| <input type="checkbox"/> Searched in connection with questioning regarding suspected theft | <input type="checkbox"/> Searched for unknown reason |
| | <input type="checkbox"/> Unknown reason |
| | <input type="checkbox"/> Other Specify _____ |

Source P DA GJ C-1 C-2 Pro SS B X _____

J. Group Arrest

1. Number of people arrested (circle one)

1 2 3 4 5 6 7 8 9 10 or more

Specify _____

☐ / Unknown

2. Number of people present at immediate scene of arrests:

Specify reason for selective arrest, if apparent _____

Source P DA GJ C-1 C-2 Pro SS B X _____

K. Drugs Seized

1. Was (alleged) marihuana seized at time of arrest?

Yes ☐ No ☐ Unknown ☐

2. Amount of marihuana seized?

Weight	Form
<input type="checkbox"/> Less than: 1 gram 1/25 ounces	<input type="checkbox"/> trace <input type="checkbox"/> seeds <input type="checkbox"/> roach(es)
<input type="checkbox"/> Between: 1 and 5 grams 1/25 and 1/5 ounces	<input type="checkbox"/> joints
<input type="checkbox"/> Between: 5-30 grams 1/5 and 1 ounces Specify _____	<input type="checkbox"/> lids (or fraction) <input type="checkbox"/> joints
<input type="checkbox"/> Between: 30-120 grams 1-4 ounces Specify _____	<input type="checkbox"/> lids <input type="checkbox"/> joints <input type="checkbox"/> keys (bricks)(fraction)
<input type="checkbox"/> Between: 120-240 grams 4-8 ounces Specify _____	<input type="checkbox"/> lids <input type="checkbox"/> joints <input type="checkbox"/> keys (bricks)(fraction)
<input type="checkbox"/> Over: 240 grams 8 ounces Specify _____	<input type="checkbox"/> lids <input type="checkbox"/> keys (bricks)

Source P DA GJ C-1 C-2 Pro SS B X _____

3. Amount of marihuana allegedly sold:

Weight	Form
<input type="checkbox"/> Less than: 1 gram 1/25 ounces	<input type="checkbox"/> trace <input type="checkbox"/> seeds <input type="checkbox"/> roach(es)
<input type="checkbox"/> Between: 1 and 5 grams 1/25 and 1/5 ounces	<input type="checkbox"/> joints
<input type="checkbox"/> Between: 5-30 grams 1/5 and 1 ounces Specify _____	<input type="checkbox"/> lids (or fraction) <input type="checkbox"/> joints
<input type="checkbox"/> Between: 30-120 grams 1-4 ounces Specify _____	<input type="checkbox"/> lids <input type="checkbox"/> joints <input type="checkbox"/> keys (bricks)(fraction)
<input type="checkbox"/> Between: 120-240 grams 4-8 ounces Specify _____	<input type="checkbox"/> lids <input type="checkbox"/> joints <input type="checkbox"/> keys (bricks)(fraction)
<input type="checkbox"/> Over: 240 grams 8 ounces Specify _____	<input type="checkbox"/> lids <input type="checkbox"/> keys (bricks)

Source P DA GJ C-1 C-2 Pro SS B X _____

4. Identification of marihuana

(a) Was seized substance chemically identified?

Yes ☐ No ☐ Unknown ☐

(b) Seized substance was identified: (more than one may apply)

- ☐ all marihuana
- ☐ all hashish
- ☐ part marihuana
- ☐ part hashish
- ☐ contained psychoactive adulterants (e.g. LSD)
specify _____
- ☐ contained inert adulterants (e.g. oregano)
specify _____
- ☐ unknown

Source P DA GJ C-1 C-2 Pro SS B X _____

5. Were other drugs seized?

Yes ☐ No ☐ Unknown ☐

Which drug(s) _____

Amount		
Drug	Weight	Form
1.	_____	<input type="checkbox"/> pills <input type="checkbox"/> capsules <input type="checkbox"/> other specify _____ _____
2.	_____	<input type="checkbox"/> pills <input type="checkbox"/> capsules <input type="checkbox"/> other specify _____ _____
3.	_____	<input type="checkbox"/> pills <input type="checkbox"/> capsules <input type="checkbox"/> other specify _____ _____

Source P DA GJ C-1 C-2 Pro SS B X _____

L. Procedural Aspects of Apprehension (at scene of arrest)

1. Was arrestee given "Miranda" warnings?

Yes ☐ No ☐ Unknown ☐

Source P DA GJ C-1 C-2 Pro SS B X _____

2. Did arrestee make a statement?

Yes ☐ No ☐ Unknown ☐

If yes, summarize briefly:

Source P DA GJ C-1 C-2 Pro SS B X _____

M. Immediate Post Arrest Disposition

1. Adult:

☐ Arrestee was taken to "station house" or similar place

☐ Arrestee was released

☐ arrest not contemplated

☐ arrest contemplated

[If released, indicate recorded reason and conditions, if any

Other _____

Source P DA GJ C-1 C-2 Pro SS B X _____

2. Juvenile

- ☐ Arrestee was taken into custody
☐ Arrestee was released with warning
☐ Arrestee was released into custody of parents
- ☐ petition contemplated
☐ arrestee taken into custody
☐ arrestee released in custody of parents
- ☐ petition not contemplated
☐ arrestee released with warning
☐ arrestee released into custody of parents

Source: P DA GJ C-1 C-2 Pro SS B X _____

IV. Adult: Post-Arrest Pre-Trial Disposition

A. Procedural Aspects of Station-House Custody

1. Was arrestee interrogated?

Yes ☐ No ☐ Unknown ☐

Source P DA GJ C-1 C-2 Pro SS B X _____

2. Was an attorney present during interrogation?

☐ Yes Name _____
☐ No
☐ Unknown

Source P DA GJ C-1 C-2 Pro SS B X _____

3 Did arrestee make a statement?

Yes ☐ No ☐ Unknown ☐

If yes, summarize briefly: _____

Source P DA GJ C-1 C-2 Pro SS B X _____

B. The "Charge" Phase

1. Did arresting officer(s) file charges?

- ☐ No
- ☐ arrestee was released
specify reason (see code C) _____
- ☐ arrestee was diverted. Explain (see Code D) _____
- ☐ other - specify _____

☐ Yes - Which charges (circle appropriate symbols on code B)

Source P DA GJ C-1 C-2 Pro SS B X _____

Code B

Present Offenses

1. possession (marihuana)
 - 1A.
 - 1B.
2. sale (marihuana)
 - 2A.
 - 2B.
3. possession of over statutory minimum (marihuana)
 - 3A.
 - 3B.
4. possession with intent to sell (marihuana)
 - 4A.
 - 4B.
5. cultivation (marihuana)
6. use (marihuana)
7. sale to minor (marihuana)
 - 7A.
 - 7B.
8. possession of implements of crime or possession of narcotics paraphrenalia
9. presence in illegal establishment/or being in or remaining in a place with knowledge that drugs are being used
10. maintaining an illegal establishment
11. narcotics vagrancy
 - 11A.
 - 11B.
12. possession (and variants) of dangerous drugs, specify _____
 - 12A.
 - 12B.
13. possession (and variants) of heroin or other opiates, specify _____
 - 13A.
 - 13B.
14. possession (and variants) of cocaine
 - 14A.
 - 14B.
15. sale (and variants) of dangerous drugs, specify _____
 - 15A.
 - 15B.
16. sale (and variants) of heroin or other opiates, specify _____
 - 16A.
 - 16B.
17. sale (and variants) of cocaine
 - 17A.
 - 17B.
18. other drug-related offense, specify _____
 - 18A.
 - 18B.
19. loitering
20. disorderly conduct
21. other: non-drug-related misdemeanor, specify _____
 - 21A.
 - 21B.
22. other: non-drug-related felony, specify _____
 - 22A.
 - 22B.
 - 22C.
23. prior conviction which, if demonstrated would subject defendant to increased penalties under recidivist statute or separate provision of drug laws
 - 23A.
 - 23B.

2. Immediate Post-Charge Disposition

☐ charges referred to prosecuting attorney for filing

☐ arrestee released. Specify reason(s) (see code C) and comment:

☐ arrestee diverted. Explain (see code D)

☐ other - Specify _____

Source P DA GJ C-1 C-2 Pro SS B X _____

C. The "Complaint" Phase: Initial Prosecutorial Disposition

1. Names of prosecuting attorneys who saw case at this stage:

Source P DA GJ C-1 C-2 Pro SS B X _____

2. Initial disposition by prosecution _____

Arresting officer's charges (offense symbols)	Dismissed (i. e. no complaint filed Put X)	Diverted (Put X and Code no.)	Filed (Put "F" felony or "M" misdemeanor)	Reasons (Put code C no. and R (recorded) or I (inferred)

Explain conditions or ambiguities _____

Source P DA GJ C-1 C-2 Pro SS B X _____

3. Summary

- ☐ no complaints filed (end of this schedule)
☐ complaint(s) filed (continue with this schedule)

4. Was defendant held in custody awaiting initial judicial phase?

(a) ☐ No. Defendant was released

- ☐ on personal recognizance - Specify conditions, if any. _____
☐ in third-party custody - Specify whose custody and conditions. _____
☐ on bail. Specify amount: _____
☐ other. Specify _____

☐ Yes

- ☐ bail was not set
☐ defendant could not raise bail, which had been set at _____
- If "yes", for approximately how long?
_____ hours

(b) Was initial bail set?

- ☐ prior to arrest by magistrate (at time arrest warrant was issued)
☐ subsequent to arrest at "station-house"
☐ unknown

Source P DA GJ C-1 C-2 Pro SS B X _____

D. Initial Formal Judicial Phase (within 96 hours)

1. Proceedings

Date

Judge

- | | | |
|--|-----------------|-------|
| <input type="checkbox"/> First Arraignment
and/or | Mo. / day / yr. | _____ |
| <input type="checkbox"/> Preliminary Hearing
and/or | Mo. / day / yr. | _____ |
| <input type="checkbox"/> Hearing before Magistrate
and/or | Mo. / day / yr. | _____ |
| <input type="checkbox"/> Other _____ | Mo. / day / yr. | _____ |

Source P DA GJ C-1 C-2 Pro SS B X _____

2. Attorney at this judicial phase.

(a) Name of attorney _____

(b) Counsel was

☐ retained by defendant
☐ appointed by court

☐ private practicing attorney
☐ member of public defender group
☐ member of legal assistance group
☐ other, specify

☐ unknown

Source P DA GJ C-1 C-2 Pro SS B X _____

3. Name of prosecutor at initial judicial phase:

Source P DA GJ C-1 C-2 Pro SS B X _____

4. Dispositions at initial judicial phase:

Counts (Charges Filed (Put offense sym- bols)	"F" or "M"	Defendants Initial Plea	Dismissed Put "X" and P (if on prose- cution's motion) D (if on defense motion) J (if by judge sua sponte)	Diverted Put "X", applicable no. from code D, and P, D or J	Reasons (Put code C no. and R (recorded) or I (inferred)

Explain conditions or ambiguities _____

Source P DA GJ C-1 C-2 Pro SS B X _____

5. Summary

(a) Dispositions final

- ☐ all counts dismissed or diverted (end of this schedule, unless ☐ case was diverted to juvenile system; then turn to Part V of this schedule.)
- ☐ no charges dismissed or diverted; defendant pleaded "G" to all counts (Skip to Part VII "Sentencing")
- ☐ some charge(s) dismissed; defendant pleaded guilty to remaining charge(s). (Skip to Part VII "Sentencing")

(b) Dispositions not final. List offenses to which defendant pleaded "NG" and which were not dismissed or diverted.

<u>Offense Symbols</u>	<u>"F" or "M"</u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

(Continue this schedule)

6. Bail Proceedings During Initial Judicial Phase

- (a) ☐ previous bail continued
- ☐ bail revised by court to
- ☐ personal recognizance - specify conditions, if any

- ☐ third-party custody - specify whose custody

- ☐ lower amount - specify

- ☐ new or higher money bond - specify

- ☐ unknown

Source P DA GJ C-1 C-2 Pro SS B X _____

(b) What was bail agency's recommendation?

Source P DA GJ C-1 C-2 Pro SS B X _____

(c) What was prosecution's recommendation?

Source P DA GJ C-1 C-2 Pro SS B X _____

(d) Did defendant raise bail?

Yes ☐ No ☐ Unknown ☐

If yes, when: _____ which was _____ hours after
Mo. / day / yr. apprehension.

Source P DA GJ C-1 C-2 Pro SS B X _____

(e) Was bail obtained from professional bail bondsman?

Yes ☐ No ☐ Unknown ☐

Source P DA GJ C-1 C-2 Pro SS B X _____

7. For Felonies Only

Did grand jury refuse to return an indictment on any offense?

No ☐ Yes ☐ Specify offense symbols _____

Source P DA GJ C-1 C-2 Pro SS B X _____

E. Subsequent Pre-Trial Proceedings

1.	<u>Proceeding</u>	<u>Date</u>	<u>Judge</u>
	_____	____/____/____ Mo. day yr.	_____
	_____	____/____/____ Mo. day yr.	_____
	_____	____/____/____ Mo. day yr.	_____

Source P DA GJ C-1 C-2 Pro SS B X _____

2. Attorney at Subsequent Pre-Trial Proceedings:

☐ same as at initial stage

☐ new attorney

(a) Name of new attorney _____

(b) New counsel was

☐ retained by defendant

☒ appointed by court

☐ private practicing attorney

☐ member of public defender group

☐ member of legal assistance group

☐ other - specify _____

☐ unknown

Source P DA GJ C-1 C-2 Pro SS B X _____

3. Name of prosecutor at this stage:

Source P DA GJ C-1 C-2 Pro SS B X _____

4. Motions

Motion	Did defendant make such a motion prior to trial (yes or no); indicate grounds *(more than one may apply)	Applicable to which counts (offense symbols)	Granted (G indicate grounds*) Denied (D) Unknown (U)
Motion to Suppress Evidence			
Motion to quash indictment			
Motion to Challenge Sufficiency of prosecution's prima-facie case			
Other Specify _____			

*Grounds of Motion to Suppress

- H. entrapment
- I. defective search warrant
- J. defective arrest warrant
- K. lack of probable cause to arrest
- L. unreasonableness of search
- M. coerced confession
- N. lack of counsel at time of confession or lineup
- O. defective indictment
- P. other, specify _____

Source P DA GJ C-1 C-2 Pro SS B X

5. Subsequent Bail Proceedings

- ☐ Bail was revoked. Specify why _____
- ☐ Bail was reduced. Describe _____
- ☐ No change apparent

Source P DA GJ C-1 C-2 Pro SS B X

6. Subsequent Pre-Trial Dispositions

Counts (put offense symbols)	"F" or "M"	Defendant changed plea to "G" (put "G")	Dismissed (put "X" and "P", "D" or "J")	Diverted (put "X", applicable # from Code D and "P", "D", or "J")	Reasons (put Code C # and R (record- ed) or I (inferred))	Identify Proceed- ing (see IV E 1)

Source P DA GJ C-1 C-2 Pro SS B X

7. Summary

(a) Dispositions Final

- ☐ all counts dismissed or diverted (end of this schedule, unless ☐ case was diverted to juvenile system; then turn to part V of this schedule).
- ☐ no charges dismissed or diverted; defendant pleaded "G" to all counts. (skip to part VII "Sentencing")
- ☐ some charge(s) dismissed; defendant pleaded guilty to remaining charge(s). (skip to part VII "Sentencing")

(b) Dispositions not final. List offenses to which defendant pleaded "NG" and which were not dismissed or diverted

Offense Symbol(s)	"F" or "M"
_____	_____
_____	_____
_____	_____
_____	_____

(Continue this schedule)

V. Juvenile Post-Arrest Pre-Trial Disposition

A. Proceedings were instituted by:

- ☐ filing of complaint
☐ apprehension - brought directly to juvenile authorities
☐ apprehension - referral from criminal justice system

Source P DA GJ C-1 C-2 Pro SS B X

B. Did apprehending officer recommend that petition be filed?

Yes ☐ No ☐ Unknown ☐

Source P DA GJ C-1 C-2 Pro SS B X

C. Was a petition filed?

☐ no
specify reason(s) if available (See Code C)

☐ yes

- ☐ neglected child
☐ child in need of supervision
☐ delinquent child
- specify analogous offenses from Code B

Name of "prosecuting" official: _____

Source P DA GJ C-1 C-2 Pro SS B X

D. Was custody retained?

☐ child was not in custody

☐ yes: child sent to
☐ detention home
☐ evaluation center or medical facility
☐ other, specify _____

☐ no
(how long after apprehension was child released and
to whom)? _____

Source P DA GJ C-1 C-2 Pro SS B X

E. Initial Judicial Procedure

1. Name of judge _____
2. Date ____/____/____
mo. day year

3. Attorney

(a) Did defendant have an attorney present
Yes ☐ No ☐ Unknown ☐

(b) Name of attorney _____

(c) Counsel was

- ☐ retained by defendant
☐ appointed by court
☐ private practicing attorney
☐ member of public defender group
☐ member of legal assistance group
☐ other
☐ unknown

Source P DA GJ C-1 C-2 Pro SS B X

4. Dispositions

petition was dismissed. Specify reason (see Code C) if available _____

some "counts" of the petition were dismissed. Specify reasons (see Code C) if available _____

☐ case diverted - juvenile jurisdiction waived by court - case transferred to adult criminal justice system

☐ case diverted - child placed on pre-adjudication probation (i. e. petition not dismissed at this time but subject to dismissal upon successful completion of probationary period)

— how long _____
— conditions _____

— was petition ultimately dismissed?

☐ yes
☐ no

☐ still pending - probationary period not yet over.
child violated probation - decision not yet made to re-institute proceedings.

☐ child violated probation; proceedings re-instituted; continue schedule.

☐ unknown
☐ petition not dismissed. Continue schedule.

Source P DA GJ C-1 C-2 Pro SS B X

VI. Trial (Both Adult and Juvenile)

A. Date of Trial: / /
 mo. day yr.

which was _____ months after arrest.

Source P DA GJ C-1 C-2 Pro SS B X

B. Court: _____

Source P DA GJ C-1 C-2 Pro SS B X

C. Judge: _____

Source P DA GJ C-1 C-2 Pro SS B X

D. Attorney

☐ Defendant was represented by same attorney as at most recent pre-trial stages.

☐ Defendant was represented by different counsel.

1. Name of new attorney _____

2. New Counsel was

☒ retained by defendant

☐ appointed by court

☐ private practicing attorney

☐ member of Public Defender Group

☐ member of Legal Assistance Group

☐ other, specify

☐ unknown

Source P DA GJ C-1 C-2 Pro SS B X

E. Name of prosecuting attorney: _____

Source P DA GJ C-1 C-2 Pro SS B X

F. Motions at Trial

Motion	Did defendant make such a motion at trial (yes or no); indicate grounds *(more than one may apply)	Applicable to which counts (offense symbols)	Granted (G indicate grounds*) Denied (D) Unknown (U)
Motion to Suppress Evidence			
Motion to quash indictment			
Motion to challenge sufficiency of prosecution's prima-facie case			
Other Specify			

*Grounds of Motion to suppress

- H. entrapment
- I. defective search warrant
- J. defective arrest warrant
- K. lack of probable cause to arrest
- L. unreasonableness of search
- M. coerced confession
- N. lack of counsel at time of confession or lineup
- O. defective indictment
- P. other, specify _____

Source P DA GJ C-1 C-2 Pro SS B X

G. Trier of Fact

☐ Judge ☐ Jury ☐ Unknown

H. Disposition

Count (offense symbol)	"F" or "M"	Defendant changed plea to "G"	Dismissal (Put "X" and "P" "D" or "J")	Diverted (Put "X," applicable # from Code D and "P" "D" or "J")	Reasons (Put Code C # and R (recorded) or I (Inferred))	Verdict 1. Guilty as charged 2. Not Guilty 3. Hung Jury 4. Mistrial 5. Guilty of lesser included offense (Specify Code B)

Source P DA GJ C-1 C-2 Pro SS B X

I. If convicted, did defendant enter notice of appeal?

No ☐/ Yes ☐/ Specify date _____

Source P DA GJ C-1 C-2 Pro SS B X

VII. SENTENCING

A. Date _____
mo. day yr.

Source P DA GJ C-1 C-2 Pro SS B X

B. Judge _____

Source P DA GJ C-1 C-2 Pro SS B X

Offense Symbol _____

C. Sentencing Options Under Applicable Statute or Ordinance

1. Incarceration

a. Maximum

- ☐ no incarceration permitted
☐ 30 days or under
☐ over 30 days, not over six months
☐ over six months, not over one year
☐ over one year, not over two years
☐ over two years, not over five years. Specify _____
☐ over five years, not over ten years. Specify _____
☐ over ten years. Specify _____

b. Is there a mandatory minimum

- ☐ No
☐ Yes. Specify _____

Source P DA GJ C-1 C-2 Pro SS B X

2. Fine. Specify maximum

Source P DA GJ C-1 C-2 Pro SS B X

D. Sentence Assessed

1. Incarceration

- ☐ No
☐ Yes
☐ 30 days or under
☐ over 30 days, not over six months
☐ over six months, not over one year
☐ over one year, not over two years
☐ over two years, not over five years. Specify _____
☐ over five years, not over ten years. Specify _____
☐ over ten years. Specify _____

Source P DA GJ C-1 C-2 Pro SS B X

2. Fine

- ☐ No
☐ Yes. Specify amount and conditions _____

3. Probation

- ☐ No
☐ Yes

(a) was probation recommended by the probation department? Yes ☐ No ☐ Unknown ☐

(b) position of prosecuting attorney: favored ☐
opposed ☐ no position ☐

(c) supervision

- ☐ to court
☐ to probation department
☐ to parent
☐ to private agency or institution, subject to supervision of probation department
☐ to reputable citizen
☐ other; specify _____

(d) terms

- ☐ medical treatment for narcotics addiction
☐ work
☐ psychiatric treatment
☐ school
☐ drug-education class
☐ other; specify _____

(e) did court provide that upon successful completion of probation:

- ☐ case would be dismissed
☐ record would be expunged
☐ unknown
☐ inapplicable

Source P DA GJ C-1 C-2 Pro SS B X

4. First offender treatment

☐ Not applicable

☐ No

☐ Yes

specify terms _____

Source P DA GJ C-1 C-2 Pro SS B X

5. Treatment/Rehabilitation

Was defendant committed to or enrolled in any identifiable rehabilitation program?

☐ Unknown

☐ No

☐ Yes

☐ narcotics

☐ marihuana

Specify how long and describe:

Source P DA GJ C-1 C-2 Pro SS B X

Code A

Prior Offenses (Arrests)

Place A or J (for Adult or Juvenile) and the appropriate symbol(s) as follows:

- 10 Possession of "narcotic" drug**
 - 11 Possession of marihuana**
 - 12 Possession of heroin or other opium derivatives**
 - 13 Possession of cocaine or derivatives**
- 20 Possession of "dangerous" drugs**
 - 21 Possession of amphetamines**
 - 22 Possession of barbiturates**
 - 23 Possession of LSD**
 - 24 Possession of other dangerous drugs**
- 30 Sale of "narcotic" drugs**
 - 31 Sale of marihuana**
 - 32 Sale of heroin or other opium derivatives**
 - 33 Sale of cocaine or derivatives**
- 40 Sale of "dangerous" drugs**
 - 41 Sale of amphetamines**
 - 42 Sale of barbiturates**
 - 43 Sale of LSD**
 - 44 Sale of other "dangerous" drugs**
- 50 Narcotic Drugs - possession of over statutory amount or possession with intent to sell (super possession)**
 - 51 Super possession of marihuana**
 - 52 Super possession of heroin or other opium derivatives**
 - 53 Super possession of cocaine or derivatives**
- 60 Dangerous drugs - super possession**
 - 61 Super possession of amphetamines**
 - 62 Super possession of barbiturates**
 - 63 Super possession of LSD**
 - 64 Super possession of other "dangerous" drugs**

- 70 Sale of drugs to minor
 - 71 Sale of marihuana to minor
 - 72 Sale of narcotic drugs to minor
 - 73 Sale of dangerous drugs to minor
- 80 "Presence in illegal establishment" or "present in place with knowledge that drugs are being used"
- 81 Maintaining an illegal establishment
- 82 Narcotics vagrancy
- 83 Possession of narcotics paraphrenalia
- 84 Disorderly conduct
- 85. Public drunkenness
- 86. Illegal possession of alcohol
- 87. Other drug-related misdemeanor
- 88. Other drug-related felony
- 90. Politically-related crime
- 91. Non-drug-related misdemeanor
- 92. Violent crime
- 93. Other major crime (non-drug related non-violent felony)
- 99. Delinquency
- 100. Offense unknown

Code C

Reasons for Dismissal, Diversion or Reduction of Offense

1. Search unlawful because incident to unlawful arrest
2. Search unlawful because unreasonable in scope
3. Cannot link evidence to arrestee
4. Not usable amount of marihuana; no prosecution as a matter of law
5. small amount of marihuana; does not justify prosecution as a matter of policy
6. small amount of marihuana; does not justify prosecution for the more serious offense as a matter of policy
7. admissible evidence fails to establish all elements of offense
8. arrestee agrees to cooperate in apprehending other violators
9. arrestee agrees to turn "state's evidence"
10. police refuse to reveal identity of informant or undercover agent whose testimony is essential
11. "no prosecutorial merit"
12. dismissal required in "interests of justice"
13. evidence judicially suppressed
14. arrestee (defendant) has no prior criminal record
15. arrestee's (defendant's) general personal situation militates against prosecution
16. arrestee certified to juvenile authorities
17. arrestee certified to juvenile court
18. arrestee (defendant) agrees to plead guilty to another charge on this schedule
19. arrestee (defendant) agrees to plead guilty to this charge

20. arrestee (defendant) agreed to plead guilty to another charge (not in this schedule)
21. prosecution confident of conviction on remaining charges
22. prosecution confident of conviction on another charge (not in this schedule)
23. prosecution failed to establish prima facie case or reasonable cause for defendant to be held
24. Grand Jury refused to return indictment
25. other. Specify _____
26. other. Specify _____

Code D

Diversions

1. case referred to juvenile authorities
2. case certified to juvenile court
3. case certified to inferior criminal court
4. arrestee (defendant) placed on informal probation prior to/in lieu of prosecution or trial
5. defendant certified to treatment or rehabilitation center
6. arrestee (defendant) transferred to another jurisdiction where more serious charge is pending
7. other. Specify _____
8. other. Specify _____

II. Enforcement Behavior at the Federal Level

The federal enforcement structure in the area of illegal drug use and traffic involves three agencies: the Bureau of Narcotics and Dangerous Drugs of the United States Department of Justice (hereinafter "BNDD"); the United States Bureau of Customs (hereinafter "Customs"); and the Immigration and Naturalization Service (hereinafter "INS").

In general, the Commission found that it is the avowed policy of the Federal Government and its agencies to concentrate their enforcement efforts on major trafficking in cannabis—the operations of wholesalers and of large-scale dealers and importers. In light of this enforcement policy, arrests for the relatively minor offense of possession of small amounts of marihuana made by federal officials are considered ancillary to the main objective.

A recent policy paper submitted to the Commission by John Ingersoll, Director of BNDD, stated that in view of the current proportions of this nation's drug problem:

the most that law enforcement can do . . . is to raise its sights and apply its major efforts against the proselytizers, against the distributors, against the smugglers, and against the sources of supply both nationally and internationally.

Mr. Ingersoll added:

We can train our police better, improve our evidence gathering responsibilities, enforce the laws where the greatest impact will result, and strive to cut off the various sources.

The Commission was apprised that personnel from Customs, the Federal Aviation Agency, and the Coast Guard coordinate their facilities and intelligence information to detect smuggling by means of aircraft or boats. INS also cooperates with Customs and BNDD in uncovering smuggling accomplished via automobile or foot traffic at the several points of entry to the United States.

Because of the commercially-oriented enforcement policy at the federal level, responsibility for possession of small quantities of marihuana and casual distribution of the drug resides principally at the state level.

General Trends

At the federal level, statistics on the number of arrests and convictions for violation of the marihuana laws and on the amount of marihuana seized annually in the United States can be obtained only for the past five to 10 years. Earlier statistical collections for the most part did not

break out marihuana cases from all drug cases. The one exception was the collection of the Administrative Office of the United States Courts, which has compiled figures since Fiscal Year 1945. This office has maintained separate statistics regarding the outcome of cases in which defendants were charged with violations of the marihuana laws or with violations of any of the federal narcotic laws covering marihuana.

IN THE FEDERAL COURTS

The statistics on disposition of marihuana and narcotic drug cases in the federal courts for Fiscal Years 1945 through 1971 reflect a sharp increase in marihuana defendants over the last five years.

Despite the increasing number of cases being brought, the rate of conviction is decreasing. In 1971, the most recent year for which the

figures are complete, Tables 1A and 1B show that 3,323 cases were initiated against marihuana defendants in the federal courts. Approximately 60% of the defendants against whom indictments or informations were filed were convicted, as compared to 73% the year before. Of those sentenced 52.7% were fined or put on probation. Put another way, of the 3,323 defendants for whom indictments or informations for marihuana offenses were filed in the federal courts, 28% were incarcerated.

Ninety-five percent of the 1971 cases which did not result in a conviction were dismissed; and, of those persons who were convicted, 91% plead guilty or *nolo contendere*, possibly to a "lesser" crime. These figures suggest the substantial role plea bargaining plays in expediting cases in a federal prosecutor's large caseload.

The number of marihuana defendants prosecuted in the federal courts between 1945 and

TABLE 1A
Dispositions of Defendants with Marihuana Tax Act Violations in the U. S. District Courts
(Fiscal Years 1945 - 1971)

NOT CONVICTED										CONVICTED AND SENTENCED					
Fiscal Year	Total Defendants	% Change Over Previous Year	Total Not Convicted	% Not Convicted	NARA 1	Total Dismissed	% Dismissed	Acquitted by Court	Acquitted by Jury	Total Convicted	% Convicted	Convicted by Plea		Convicted by Trial	
												Pled Guilty or Nolo	% of Total Who Pled Guilty or Nolo	Convicted by Court	Convicted by Jury
1945	595		75	12.60	-	64	85.33	2	9	520	87.40	475	91.34	12	33
1946	707	18.82	92	13.01	-	68	73.91	6	18	615	86.99	564	91.70	21	30
1947	858	21.35	61	7.10	-	42	68.85	6	13	797	92.90	717	89.96	31	49
1948	877	2.21	118	13.45	-	75	63.55	5	38	759	86.55	668	88.01	25	66
1949	1,033	17.78	112	10.84	-	68	60.71	8	36	921	89.16	801	86.97	42	78
1950	1,241	20.13	151	12.16	-	103	68.21	17	31	1,090	87.84	954	87.52	38	98
1951	1,080	-12.89	147	13.61	-	100	68.02	15	32	933	86.39	777	83.27	48	108
1952	907	-16.01	101	11.13	-	67	66.33	13	21	806	88.87	645	80.02	45	116
1953	1,067	17.64	143	13.40	-	91	63.63	15	37	924	86.60	731	79.11	58	135
1954	926	-13.21	152	16.41	-	112	73.68	15	25	774	83.59	585	75.58	40	149
1955	783	-15.44	133	16.98	-	94	70.67	23	16	650	83.02	478	73.53	37	135
1956	639	-18.39	145	22.69	-	87	60.00	26	32	494	77.31	377	76.31	26	91
1957	704	10.17	99	14.06	-	62	62.62	19	18	605	85.94	446	73.71	25	134
1958	556	-21.02	95	17.08	-	62	65.26	8	25	461	82.92	333	72.23	23	105
1959	453	-18.52	87	19.20	-	62	71.26	7	18	366	80.80	271	74.04	32	63
1960	566	24.94	108	19.08	-	75	69.44	10	23	458	80.92	342	74.67	30	86
1961	453	-19.96	96	21.19	-	70	72.91	7	19	357	78.81	273	76.47	15	69
1962	462	2.20	83	17.96	-	62	74.69	6	15	379	82.04	279	73.61	38	62
1963	490	6.26	66	13.46	-	51	77.27	8	7	424	86.54	340	80.18	19	65
1964	415	-15.30	62	14.93	-	47	75.80	9	6	353	85.07	279	79.03	23	51
1965	523	26.02	53	10.13	-	37	69.81	11	8	470	89.87	386	82.12	12	72
1966	746	42.63	96	12.86	-	75	78.12	17	10	650	87.14	557	85.69	13	80
1967	961	28.82	189	19.66	-	158	85.59	27	14	772	80.34	666	86.26	31	75
1968	1,433	49.11	297	20.72	-	236	79.46	32	34	1,136	79.28	942	82.92	53	141
1969	2,189	52.75	517	23.61	1	437	84.52	29	47	1,672	76.39	1,463	87.50	58	151
1970	2,082	- 4.88	551	26.46	-	491	89.11	18	31	1,531	73.54	1,359	88.76	35	137
1971	3,323	59.60	1,322	39.78	2	1,256	95.00		46	2,001	60.22	1,822	91.05	43	136

¹ Defendants who were committed under 28 U. S. C. 2902 (b) of the Narcotic Addict Rehabilitation Act.

NOTE: Excludes District of Columbia, Canal Zone, Guam and Virgin Islands. Statistics reflect the disposition of defendants charged with the violation of the Marihuana Tax Act. Title 21, U. S. C. 176 (a) and Title 26 U. S. C. 4741-4762.

1971 has risen 458.48%; the number of those marihuana defendants not convicted during that same time span has increased 1662.66%. This

trend can be seen in the following five-year table provided by the Administrative Office of the United States Courts:

	Total number marihuana defendants	Percent change	Marihuana defendants not convicted ¹	Percent change
1947 to 1951.....	5,089		589	
1952 to 1956.....	4,322	-15.07	674	14.43
1957 to 1961.....	2,732	-36.78	485	-28.04
1962 to 1966.....	2,636	-3.51	340	-29.89
1967 to 1971.....	9,988	278.90	2,876	745.88

¹ Includes dismissals and acquittals.

TABLE 1B

Types of Sentences Received by Defendants Convicted of Marihuana Tax Act Violations in the U. S. District Courts
(Fiscal Years 1945 - 1971)

INCARCERATED ¹												NOT INCARCERATED			
Fiscal Year	Total Incarcerated	% Incarcerated of Total Convicted	Split ² Sentence	1 Year and 1 Day	% of Total Sentenced	1 Year and 1 Day to 3 Years	% of Total Sentenced	3 to 5 Years	% of Total Sentenced	Over 5 Years	% of Total Sentenced	Average No. of Months Incarcerated	Probation	Fine and Other*	% Who Received Fine or Probation of Those Convicted
1945	415	79.80	-	210	50.60	146	35.18	45	10.84	14	3.37	17.2	99	6	20.19
1946	486	79.02	-	274	56.37	169	34.77	32	6.58	11	2.26	14.8	124	5	20.97
1947	586	73.52	-	289	49.31	208	35.49	75	12.79	14	2.38	16.6	198	13	26.47
1948	554	72.99	-	271	48.91	211	38.08	58	10.46	14	2.52	17.0	197	8	27.00
1949	682	74.04	-	368	53.95	235	34.45	65	9.53	14	2.05	16.0	233	6	25.95
1950	824	75.59	-	366	44.41	321	38.95	94	11.40	43	5.21	19.0	258	8	24.40
1951	750	80.38	-	276	36.80	323	43.06	106	14.13	45	6.00	21.5	173	10	19.61
1952	643	79.77	-	118	18.35	286	44.47	141	21.92	98	15.24	31.5	160	3	20.22
1953	698	75.54	-	45	6.44	388	55.58	138	19.77	127	18.19	35.8	216	10	24.45
1954	549	70.93	-	51	9.28	271	49.36	97	17.66	130	23.67	38.4	214	11	29.06
1955	475	73.07	-	35	7.36	232	48.84	112	23.57	96	20.21	37.8	164	11	26.92
1956	378	76.51	-	26	6.87	165	43.65	80	21.16	107	28.30	42.8	112	4	23.48
1957	491	81.15	-	9	1.83	127	25.86	107	21.79	248	50.50	58.3	114	-	18.84
1958	345	74.83	-	-	0.00	55	15.94	58	16.81	232	67.24	62.8	116	-	25.16
1959	264	72.13	*	7	2.65	36	13.63	31	11.74	190	71.96	67.2	102	-	27.86
1960	325	70.96	*	8	2.46	40	12.30	53	16.30	224	68.92	64.5	133	-	29.03
1961	252	70.58	*	6	2.38	24	9.52	38	15.07	184	73.01	70.8	104	1	29.41
1962	269	70.97	*	7	2.60	44	16.35	38	14.12	180	66.91	64.9	106	4	29.02
1963	258	60.84	*	17	6.58	40	15.50	50	19.37	151	58.52	61.3	159	7	39.15
1964	205	58.07	6	1	3.41	23	11.21	45	21.95	130	63.41	57.9	139	9	41.92
1965	274	58.29	10	9	6.93	32	11.67	57	20.80	166	60.58	58.2	192	4	41.70
1966	335	51.53	32	13	13.43	35	10.44	91	27.16	164	48.95	53.7	311	4	48.46
1967	370	47.92	49	2	13.78	42	11.35	112	30.27	165	44.59	51.0	392	10	52.07
1968	564	49.64	57	11	12.05	59	10.46	175	31.02	262	46.45	51.2	560	12	50.35
1969	750	44.85	58	20	10.40	82	10.93	282	37.60	308	41.06	52.6	911	11	55.14
1970	571	37.29	50	31	14.18	96	16.81	180	31.52	214	37.47	46.7	946	14	62.70
1971	947	47.32	184	25	22.06	179	18.90	301	31.78	258	27.24	39.9	1,001	53	52.67

¹ Includes sentences of more than 6 months which are to be followed by a term of probation (mixed sentences).

² A split sentence is a sentence on a one-count indictment of 6 months or less in a jail-type institution followed by a term of probation, 18 U.S.C. 3651. Included in these figures are mixed sentences involving confinement for 6 months or less on one count, to be followed by a term of probation on one or more counts.

*Prior to 1960 other included with Probation.

NOTE: Excludes District of Columbia, Canal Zone, Guam and Virgin Islands. Statistics reflect the disposition of defendants charged with the violation of the Marihuana Tax Act. Title 21, U.S.C. 176 (a) and Title 26 U.S.C. 4741-4762.

The hypothesis that the offenders whose cases make it through the judicial system's screening process are more likely to be involved with sales is difficult to test with these figures. It is suggested by the fact that among the cases resulting in incarceration the most frequent sentences handed down in recent years have been from three to five years' duration. However, since the Administrative Office does not separate

sale and possession charges, it is impossible to match charges against type of disposition. In the study appearing later in this chapter, dispositions will be matched against charges for the federal arrests during 1970.

In comparison to *marihuana* offenders, the percentage of defendants imprisoned for *narcotic* law violations has remained stable to date, while the percentage of *marihuana* offenders who are

TABLE 2A
Disposition of Defendants Charged With Violations of Federal Narcotic Drug Laws in the U. S. District Courts
(Fiscal Years 1945 - 1971)

Fiscal Year	Total Defendants	% Change in Total Over Previous Year	NOT CONVICTED				CONVICTED			
			Total Not Convicted	% Not Convicted	Dismissed ¹	% Dismissed of Those Not Convicted	Total Convicted	% Convicted	Convicted by Plea of Guilty or Nolo ²	% of Total Convicted Who Pled Guilty or Nolo
1945	818		153	18.70	133	86.92	665	81.30	587	88.27
1946	980	19.80	257	26.22	237	92.21	723	73.78	654	90.45
1947	1,022	4.28	149	14.57	111	74.49	873	85.43	800	91.63
1948	913	-10.66	190	20.81	162	85.26	723	79.19	656	90.73
1949	773	-15.33	96	12.41	80	83.33	677	87.59	603	89.06
1950	1,159	49.93	113	9.74	81	71.68	1,046	90.26	953	91.10
1951	1,252	8.02	157	12.53	134	85.35	1,095	87.47	968	88.40
1952	1,214	- 3.03	151	12.43	117	77.48	1,063	87.57	878	82.59
1953	1,269	4.53	190	14.97	146	76.48	1,079	85.03	858	79.51
1954	1,294	1.73	158	12.21	127	80.37	1,136	87.79	906	79.75
1955	1,383	7.12	230	16.63	185	80.43	1,153	83.37	908	78.75
1956	1,196	13.52	169	14.13	134	79.28	1,027	85.87	791	77.02
1957	1,206	0.83	157	13.01	122	77.70	1,049	86.99	818	77.97
1958	1,386	14.92	206	14.86	155	75.24	1,180	85.14	805	68.22
1959	1,289	- 6.99	277	21.48	205	74.00	1,012	78.52	734	72.52
1960	1,280	- 0.69	232	18.12	188	81.03	1,048	81.88	813	77.57
1961	1,375	7.42	217	15.78	178	82.02	1,158	84.22	898	77.54
1962	1,181	-14.10	157	13.29	113	71.97	1,024	86.71	743	72.55
1963	1,199	1.52	217	18.09	171	78.80	982	81.91	700	71.28
1964	1,264	5.42	209	16.53	158	75.59	1,055	83.47	760	72.03
1965	1,555	23.02	270	17.36	220	81.48	1,285	82.64	998	77.66
1966	1,477	- 5.01	253	17.12	205	81.02	1,224	82.88	912	74.50
1967	1,289	-12.72	239	18.54	205	85.77	1,050	81.46	758	72.19
1968	1,259	- 2.32	266	21.12	230	86.46	993	78.88	722	72.70
1969	1,356	7.70	319	23.52	279	87.46	1,037	76.48	776	74.83
1970	1,338	- 1.32	408	30.49	375	91.91	930	69.51	671	72.15
1971	2,043	52.69	882	43.17	824	93.42	1,161	56.83	860	74.07

¹ Difference between Dismissal and Total Not Convicted is the number of defendants acquitted by the court or jury.

² Difference between those who pled and Total Convicted is the number of defendants convicted by court or jury.

*Excludes District of Columbia, Canal Zone, Guam and Virgin Islands.

NOTE: Statistics reflect defendants charged with violations of Narcotics-Border registration. Title 18 U. S. C. 1407 and other violations of narcotic laws under Title 18 U. S. C. 494, 1403, 1406; Title 21 U. S. C. 171- 200, except 176 (a); Title 26 U. S. C.

TABLE 2B

Types of Sentences Received by Defendants Charged with Violations of the Narcotic Drug Laws in the District Courts.
(Fiscal Years 1945 - 1971)

Fiscal Year	INCARCERATED										NOT CONVICTED			
	Total Incarcerated	% Incarcerated of Total Convicted	1 Year and 1 Day	% 1 Year and 1 Day	1 Year and 1 Day to 3 Years	% 1 Year and 1 Day to 3 Years	3 to 5 Years	% 3 to 5 Years	Over 5 Years	% Over 5 Years	Total Receiving Probation	% Receiving Probation of Total Convicted	Total Receiving Fines and Other	% of Total Convicted Receiving Fines or Probation
1945	446	67.06	98	21.97	214	47.98	95	21.30	39	8.74	188	28.27	31	32.93
1946	463	64.03	156	33.69	208	44.92	76	16.41	23	4.96	245	33.88	15	35.96
1947	542	62.08	182	33.57	244	45.01	86	15.86	30	5.53	306	35.05	25	37.91
1948	494	68.32	217	43.92	197	39.87	64	12.95	16	3.23	214	29.59	15	33.05
1949	505	74.59	173	34.25	216	42.77	87	17.22	29	5.74	165	24.37	7	25.40
1950	830	79.34	229	27.59	415	50.00	124	14.93	62	7.46	213	20.36	3	20.65
1951	909	83.01	197	21.67	348	38.28	222	24.42	142	15.62	172	15.70	14	16.98
1952	908	85.41	103	11.34	366	40.30	261	28.74	178	19.60	152	14.29	3	14.58
1953	888	82.29	63	7.09	401	45.15	220	24.77	204	22.97	187	17.33	4	17.70
1954	934	82.21	21	2.24	410	43.89	263	28.15	240	25.69	197	17.34	5	17.78
1955	982	85.16	12	1.22	416	42.36	248	25.25	306	31.16	165	14.31	6	14.83
1956	880	85.68	4	0.45	346	39.31	261	29.65	269	30.56	138	13.33	9	14.31
1957	941	89.70	7	0.74	199	21.14	141	14.98	594	63.12	106	10.10	2	10.29
1958	1,006	85.25	25	2.48	112	11.13	83	8.25	786	78.13	166	14.06	8	14.74
1959	887	87.64	36	4.05	90	10.14	64	7.21	697	78.57	122	12.05	3	12.35
1960	907	86.54	25	2.75	105	11.57	95	10.47	782	86.21	138	13.16	3	13.45
1961	1,006	86.87	36	3.57	102	10.13	67	6.66	801	79.62	148	12.78	4	13.12
1962	904	88.28	31	3.42	85	9.40	68	7.52	720	79.64	111	10.83	9	11.71
1963	827	84.21	22	2.66	104	12.57	63	7.61	638	77.14	145	14.76	10	15.78
1964	871	82.55	21	2.41	119	13.66	112	12.85	619	71.06	170	16.11	14	17.44
1965	983	76.49	34	3.45	154	15.66	140	14.44	655	66.63	288	22.41	14	23.50
1966	937	76.55	40	4.26	119	12.70	185	19.74	593	63.28	278	22.71	9	23.44
1967	810	77.14	32	3.95	97	11.97	133	16.41	548	67.65	228	21.71	12	22.85
1968	804	80.96	25	3.10	82	10.19	118	14.67	579	72.01	168	16.91	21	19.03
1969	831	80.13	32	3.85	97	11.67	118	14.19	584	70.27	199	19.18	7	19.86
1970	712	76.55	20	2.80	70	9.83	96	13.48	526	73.87	210	22.58	8	23.44
1971	887	76.39	40	4.50	121	13.64	127	14.31	599	67.53	257	22.13	17	23.60

NOTE: Statistics reflect defendants charged with violations of Narcotics-Border registration, Title 18 U. S. C. 1407 and other violations of narcotic laws under Title 18 U. S. C. 494, 1403, 1406; Title 21 U. S. C. 171-200, except 176 (a); Title 26 U. S. C.

actually incarcerated has steadily decreased. As illustrated in the chart below, narcotic defendants are considerably more likely to be imprisoned.

	Percent total imprisoned of all narcotic defendants convicted	Percent total imprisoned of all marihuana defendants convicted
1967	77.14	47.92
1968	80.96	49.64
1969	80.13	44.85
1970	76.55	37.29
1971	76.39	47.32

In 1971, 76% of all narcotic defendants convicted were imprisoned, and 68% of these were sentenced to imprisonment for a period of five years or more.

Also in contrast to marihuana cases, the number of which has almost constantly risen in re-

cent years, the total number of narcotic cases remained fairly stable through 1970 (See Table 2). However, in 1971 there was a 52.7% jump in the number of narcotic defendants. This figure may reflect either better data collection or increased law enforcement effort. Interestingly, in that same year, the percentage of these offenders not convicted increased from 30% to 43%. In fact, between 1966 and 1971 the percentage of narcotic defendants not convicted has risen from 17.1% to 43.2%.

The data in Table 3 indicate that the proportion of marihuana defendants in the drug caseload at the federal level has risen drastically, from 25% in 1965 to 62% in 1971. The proportion has remained relatively constant since 1969. A similar pattern emerges with regard to the proportion of marihuana defendants in the total caseload of the federal system. From 1.6% in 1965, the proportion of marihuana defendants increased to 7.4% in 1971. Meanwhile, the pro-

Table 3

	<u>Total defendants Marihuana & Narcotic</u>	<u>Total Marihuana Defendants</u>	<u>%Marihuana Defendants</u>
1965	2, 078	523	25.16
1966	2, 223	746	33.55
1967	2, 250	961	42.71
1968	2, 692	1, 433	53.23
1969	3, 545	2, 189	61.74
1970	3, 420	2, 089	60.87
1971	5, 366	3, 323	61.92

	<u>Total Defendants in Federal System</u>	<u>% Marihuana Defendants of Total</u>	<u>% Narcotic Defendants of Total</u>	<u>% Total Drug Defendants of Total</u>
1965	33, 718	1.57	4.61	6.18
1966	31, 975	2.33	4.61	6.94
1967	31, 555	3.04	4.08	7.12
1968	31, 843	4.50	3.95	8.45
1969	32, 796	6.67	4.13	10.80
1970	36, 356	5.72	3.68	9.40
1971	44, 615	7.44	4.57	12.01

portion of narcotic defendants remained fairly constant, with marihuana cases accounting for the 100% increase in the proportion of drug cases in the federal system from 1965 to 1971.

In the Commission's second Report, on drug abuse generally, considerable attention will be paid the entire federal drug enforcement effort. With regard to marihuana, the following section presents the data gathered in a comprehensive study of the arrests made by federal authorities in calendar year 1970.

Federal Enforcement of the Marihuana Laws: 1970

BNDD, Customs and INS share responsibility for enforcing the federal laws against marihuana. BNDD is the bureau of the Justice Department established for the express purpose of enforcing the drug laws. Customs is a multifunctional government bureau with regulatory and enforcement responsibility including the prevention of smuggling. In this effort, the agency seeks to interdict the supply of marihuana transported into the country at the nation's

ports and borders. INS, responsible for patrolling the border for illegal aliens, cooperates with Customs, referring to that agency violators of the marihuana laws uncovered in its routine border checks.

In order to ascertain the nature and scope of the marihuana enforcement effort at the federal level, the Commission studied the arrests made by each of these agencies for calendar year 1970.

METHOD

The objective of the study was to identify all marihuana-related arrests at the federal level during calendar year 1970, to describe the arrestee, the circumstances under which he was detected and arrested, and to analyze the disposition of his case at the federal level.

The universe of cases was defined on the basis of records maintained in the national offices of the three participating agencies. Since the federal authorities cooperate with state and local officials in some investigations and maintain investigative files on some persons arrested by state authorities, a decision was made to include in the "federal" universe only those cases in which the federal officer actually apprehended the arrestee. Some persons arrested by federal officials were referred to the states for prosecution; such an action was treated as a possible dispositional alternative rather than as a limitation of the universe.

Since the records of three different agencies were subject to analysis, the Commission was confronted with three different sets of procedural problems.

BNDD

Extracting the necessary information from the BNDD files was a difficult task, because the marihuana cases were not segregated from the approximately 2,400 cases in which BNDD played some role during 1970. A portion of the total number of cases was strictly investigative and could be discarded immediately; however, the majority of files had to be perused to some extent in order to determine if marihuana was involved in the case. Situations in which BNDD agents assisted state or local authorities by making federal funds available for buys, or by accompanying local personnel at the time of arrest, were not included in the survey. Cases in which BNDD conducted the investigation and made the arrest, but ultimately turned the case over to the state for prosecution, were included in the survey.

Ultimately, 420 BNDD arrests were included in the study.

The typical BNDD case file consisted of detailed typewritten reports submitted by the agents conducting the investigation. These reports were usually one to five pages in length, and covered the reason for initial investigation, the negotiations for buys, subsequent buys, arrests and seizures, and status reports regarding the judicial disposition of the case.

A generally complete report of the personal history of each arrestee was also included in the file. Frequently, however, the only evidence regarding prior contact with the law was a notice that fingerprints had been forwarded to the Federal Bureau of Investigation. In those files where information as to the criminal record of the arrestee was present, the information generally related only to prior arrests; FBI information as to the disposition of these prior arrests was skeletal. The Commission has been informed that this omission is due to the failure of reporting agencies to forward dispositional information to the FBI.

Where search or arrest warrants were used by BNDD agents, that fact was mentioned in the reports; but copies of the warrants were seldom included in the files.

The files also contained seizure reports, chemists' analyses, lists of witnesses and exhibits, and a synopsis of the case.

Customs

The Customs files maintained in the national headquarters covered between 6,000 and 7,000 drug arrests. Each arrest was summarized in a one or two page report; the individual reports were filed according to each Customs region. Within each region's file, reports were filed alphabetically by defendant's name. Thus, the data collectors had to go through each file to identify marihuana-related cases. There were approximately 3000 such cases.

Customs does not maintain a central file for each of its cases; the one or two page reports in the national office are merely informational and the main file for each case is maintained in the regional office. When it became apparent that the regional files would have to be consulted to obtain complete information, the Commission decided to take a sampling of the Customs cases. The files in the national office were thus reviewed a second time in order to define the universe of every sixth marihuana case, not including INS cases. The sample consisted of 491 cases.

Complete survey instruments were then mailed to Customs' regional offices. Due to the volume of cases in the Mexico-California border area, two

members of the Commission staff were sent to the San Ysidro regional office to assist Customs personnel in extracting the necessary information. In San Ysidro, there was rarely any dispositional information after the initial arrest and seizure. Therefore, it was necessary to go to the U.S. Attorney's office to obtain this information.

INS

INS files, maintained in the national headquarters, consist only of a two-page arrest and seizure report providing the defendant's name, age, place of birth, citizenship, description of contraband and a brief description of the circumstances surrounding apprehension of the subject. Four hundred seventy-seven marihuana-related arrests were identified.

Since INS turns over most of its arrestees to Customs for filing of charges with the U.S. Attorney, it was necessary to consult the Customs files for most of the information regarding arrestees apprehended by INS.

INS cases were filed by date of arrest. In order to locate them in the Customs files, which were filed alphabetically by region, they had to be rearranged in advance. This was necessitated also by the fact that INS cases had to be extracted from the Customs files before the Customs sample could be taken. Since the files in the Customs headquarters were incomplete, some of the demographic, prior record and dispositional information was still unavailable. To complete the INS schedules, a two-page instrument was mailed to the appropriate Customs regional office for compilation.

ALLOCATION OF FEDERAL RESOURCES

Of initial interest in assessing enforcement policy at the federal level is the relative proportion of federal resources expended in the area of marihuana control.

Table 4 indicates that in terms of arrests, more than half of the Customs-INS drug effort is devoted to marihuana. A fourth of the BNDD arrests are marihuana related.

By contrast, however, the agencies estimate that they allocate less than 10% of their total enforcement resources to marihuana. BNDD estimates that 6% of its manpower and resources are applied in marihuana cases. Customs indicates that although marihuana cases account for half of its illicit drug arrests, less than a fourth of its criminal law-related resources are devoted to marihuana cases (See Table 5).

In the following pages, the nature of this high volume-low cost enforcement effort will be explored for each of the three agencies.

Table 4
Marihuana and Drug Enforcement

	BNDD	Customs	INS
1970			
No. All Drug Arrests	1 1, 711	2 6, 110	5 Approx. 500
No. Marihuana Arrests ³	420	4 3, 423	477
% of all Arrests which are Marihuana Arrests	23. 71%	56. 02%	Approx. 95%

¹Figures cover Calendar Year 1970

²Figures cover Fiscal Year 1970

³Marihuana arrest figures were determined by the Commission staff in the course of a case-by-case survey of all federal arrests during Calendar Year 1970.

⁴This figure includes the INS arrests since Customs includes INS arrests in their statistics.

⁵Figures for total INS drug arrests are not available. Estimates are based on the assumption that marihuana's bulk and the pattern of its traffic make marihuana-smuggling particularly susceptible to detection by INS. Other drugs do not share this susceptibility.

Table 5
Allocation of Enforcement Resources

	1 BNDD	2 Customs	INS Border Patrol
Total Enforcement Budget for FY 1970	\$27, 772, 000	\$96, 907, 000	\$29, 952, 000
Manpower and Resources Allocated to Enforcement of Criminal Laws	84. 5% (\$23, 467, 340)	18. 4% (\$17, 867, 500)	N/A
Manpower and Resources Allocated to Marihuana Enforcement	6% (\$1, 666, 320)	4. 4% (\$5, 600, 000)	N/A

¹ Information estimated by BNDD.

² Customs' total budget was \$128, 596, 000. Of this amount, \$96, 907, 000 was used solely for enforcement purposes. Of this latter amount, \$20, 420, 000 was used for investigative purposes. Customs estimates that 85-90% of investigative time is spent on drug cases; therefore, 87.5% of \$20, 420, 000 is \$17, 867, 500. The Director of the Office of Planning and Research of Customs estimates that approximately one-third of this effort is expended for marihuana enforcement.

BNDD

The Bureau of Narcotics and Dangerous Drugs (hereinafter referred to as BNDD) was formed in 1968 as a result of Executive Order, Reorganization Plan No. 1 of 1968. This order merged the Treasury Department's Federal Bureau of Narcotics and the Bureau of Drug Abuse Control of the Department of Health, Education and Welfare, and transferred the combined agency to the Justice Department.

BNDD's sole concern is enforcement of the federal drug laws. Official statements of BNDD

express an emphasis on narcotics enforcement, primarily trafficking. During 1970, the Commission study shows that BNDD made 420 marihuana-related arrests. The BNDD official figures show 231 arrests; it appears that the discrepancy arises from the fact that BNDD does not include the cases which it chooses to refer to the states for prosecution.

Enforcement Trends

Table 6, provided by BNDD, contains the number of marihuana arrests made by that agency in each of the years from 1965 to 1971. These figures include arrests for possession, sale and importation violations. The BNDD does not break out figures on possession arrests alone.

These statistics parallel the information about marihuana defendants in the federal courts appearing earlier in this chapter. The sharp drop in arrests made in 1969 and 1970 is attributable to *Leary v. United States*, 395 U.S. 689 [1969] which essentially precluded BNDD from bringing marihuana possession cases under the existing federal law. With passage of the Comprehensive Drug Abuse Prevention and Control Act in October 1970 the possession offense was reinstated, and the number of arrests escalated in 1971.

Table 7, also provided by BNDD, describes the amount of marihuana seized by that agency in the last four years (1971 figures do not cover the last three months of the year). Most marihuana seizures by federal authorities occur at the

Table 6

ARREST STATISTICS FOR MARIHUANA POSSESSION, SALE, AND IMPORTATION

By the Bureau of Narcotics and Dangerous Drugs

	Total Arrests	% Change from year to year
1965	405	
1966	667	64. 69
1967	706	5. 84
1968	726	2. 83
1969	333	-54. 13
1970	231	-30. 63
1971 (Jan. -Sept.)	489 ⁽¹⁾	182. 25 ⁽²⁾

⁽¹⁾Prorated for the entire year, this figure becomes 652.

⁽²⁾Prorated percentage.

Table 7

**MARIHUANA SEIZURES MADE BY THE
BUREAU OF NARCOTICS AND DANGEROUS DRUGS***

<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>
7,178 lbs.	9,924 lbs.	9,092 lbs.	10,119 lbs.

* Figures represent a combination of seizures and deliveries made to undercover agents.

**FOREIGN SEIZURES OF MARIHUANA MADE IN
COOPERATION WITH FOREIGN GOVERNMENTS AND THE
BUREAU OF NARCOTICS AND DANGEROUS DRUGS**

<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1971</u>
14,240 lbs.	830 lbs.	3,767 lbs.	14,125 lbs.	26,422 lbs.	70,811 lbs.

foreign points of origin or near ports of entry. The data in Table 7 parallel the Customs and INS data presented later in this chapter, all agencies describing an increase in international marihuana traffic.

In addition to pursuing its own enforcement program, a major portion of BNDD resources is devoted to assisting states and localities in enforcing their own drug laws. This additional function brings the agency into contact with thousands of marihuana cases each year. Frequently, state agencies will request BNDD help in investigating possible drug violations. BNDD provides the assistance required, whether it be money, advice, or undercover agents.

Because BNDD officials believe it essential that they work with the states to keep the pressure on all levels of drug traffic, they have initiated a program of training Metropolitan Enforcement Groups (MEGS). This program is designed to improve regional cooperation among drug enforcement agencies and thus to help reduce drug traffic. The BNDD also cooperates with foreign governments in identifying drug traffickers.

Most agents of BNDD operate in highly populated urban centers. Although some agents are concerned with regulating the legitimate drug industry, most of the 1500 agents are involved in stopping illicit drug traffic, including some 120 agents who are stationed in foreign countries.

The remainder of this section describes the activity of the BNDD agents in the effort to stem large scale trafficking in marihuana. It should be noted at the outset that separation

of marihuana-related activity from the entire drug enforcement effort may be somewhat artificial. In the following analysis, the nexus between marihuana enforcement and other drug enforcement will therefore be described.

The Arrestees

Demographic Characteristics. The typical BNDD arrestee is a single, white male under 26, who is a U.S. citizen.

The data in Table 8 indicate that 86% of those arrested by BNDD in 1970 in connection with marihuana-related activity were male, and more than three-fourths (77%) were white. Among minorities, more Spanish-speaking persons were arrested (12%) than were blacks (6%). With regard to age, one-fourth of the arrestees were under 21, and 71% were under 26. Almost half (46%) were in the 21 to 25 age group.

Information regarding employment status was unrecorded in 28% of the cases. Otherwise, the arrestees divide roughly into three groups: Students or military personnel (17%), persons employed at the time of arrest (25%) and persons unemployed at the time of arrest (29%). In terms of occupation, blue collar work was most frequently indicated (21%).

Prior Police Contact. Table 9 presents data regarding the nature and scope of prior involvement in the criminal justice system. Such information was unrecorded in one-fourth of the cases. Otherwise, the data show that 36% of the arrestees had no prior arrests. Proportionately more persons had more than one arrest (21%) than had one drug arrest only (7%) or one nondrug arrest only (11%). Information regarding the subsequent disposition of prior arrests was recorded for three-fourths of the persons with prior arrests. These data show that at least 43% of those previously arrested had been convicted and 16% had been previously incarcerated. Of *all* the arrestees, available information indicate that 17% had been convicted before this arrest and 6% had been incarcerated prior to this arrest.

Table 9 also shows the relationship between prior police contact and demographic characteristics. Incidence of prior arrest, conviction and incarceration appears to be associated with age, ethnicity and employment status. Proportionately fewer arrestees under 21 had been previously arrested (31%) than persons 21-to-25 (34%), 26-to-35 (55%) and over 35 (63%). Similarly, the arrestee was more likely to have been arrested more than once if he was over 25 (31%) than if he was 21-to-25 (20%) or under 21 (16%). The data also suggest, however, that a record of a single drug

Table 8

Demographic Characteristics of BNDD Arrestees

	BNDD 420
Number of People	
<u>Nationality</u>	
U.S. Citizen	83%
Alien	3
Unknown	14
<u>Age</u>	
Under 18	1
18 - 20	24
21 - 25	46
26 - 35	20
36 - 45	6
Over 45	1
Unknown	2
<u>Sex</u>	
Male	86
Female	14
Unknown	*
<u>Ethnicity</u>	
White	77
Black	6
Spanish speaking	12
Other	2
Unknown	3
<u>Marital Status</u>	
Single	38
Married	15
Separated	3
Divorced	2
Widowed	0
Unknown	41
<u>Employment Status</u>	
Student	15
Military	2
Employed	25
Unemployed	29
Retired	0
Unknown	28
<u>Occupation at Time of Offense</u>	
Student	16
Military	1
Skilled labor	4
Semi-skilled labor	4
Unskilled labor	8
Personal service	5
Sales or clerical	7
Artisan, craftsman, musician	6
Trained, technical	3
Managerial, proprietary	4
Professional	1
Other	2
Unknown	35
None	3

*Indicates less than one percent

arrest was more common among persons under 21 (10%) than among older persons (5% to 7%).

Previous convictions were also less common among persons under 25 (14% and 13%) than among older persons (26% and 27%). Similarly, proportionately fewer persons under 26 had been incarcerated (3%) than was the case with persons 26 or over (17% and 13%).

With respect to ethnicity, the minority group arrestees had been arrested (48%), convicted (23%) and incarcerated (13%) more often than the white arrestees (37% arrested, 16% convicted, 5% incarcerated). Prior police contact also varied by employment status. Prior arrests were more common among unemployed (52%) and employed (51%) arrestees than among students or military personnel (32%). Similarly, previous convictions were less common among students and military personnel (14%) than among either the unemployed (24%) or the employed (22%) arrestees. Only one percent of the students or servicemen had previously been incarcerated (6% overall).

Circumstances of Detection and Arrest

Scope of Investigation. Data (not shown) indicate that the BNDD marihuana enforcement effort is not as intensive as the effort directed toward narcotics trafficking. Although almost all of the 1970 arrests arose from investigative activity (only 2% were spontaneous arrests preceded by no investigative involvement), these investigations were generally short-term. In 86% of the cases, the pattern was either one undercover purchase followed by an arrest (a "buy" and a "bust") or a tip and a "raid." That is to say, not much strategic planning precedes most marihuana arrests. Only 13% of the cases were investigated for any significant duration or intensity.

Table 10 indicates that about half of the investigated arrests* were not preceded by undercover purchases of any drug. Instead a seizure was made from the arrestee at the time of apprehension. The arrest was preceded by one buy (not necessarily of marihuana) in 28% of the cases, by two buys in 12% and by three or more buys in 10%. A short-term undercover investigation is different in kind, though probably not in intensity, from the investigations preceding seizures. Cases in which two or more undercover purchases were made suggest a more intensive investigative effort to gather evidence against a drug trafficking apparatus.

*For purposes of the remaining analysis of circumstances and arrests, the seven spontaneous arrests have been omitted. "Arrests" will refer only to investigated arrests.

Table 9

Prior Police Contact and Demographic Characteristics - BNDD

	Prior Arrest Record					Scope of Prior Contact				
	(152)	(27)	(46)	(90)	(105)	(152)	(55)	(44)	(26)	(143)
	36%	7%	11%	21%	25%	36%	13%	11%	6%	34%
<hr/>										
	No Previous Arrests	One Drug Arrest Only	One Non-Drug Arrest Only	More than One Arrest	Unknown	No Prior Record	Arrested Not Convicted	Convicted Not Incarcerated	Convicted and Incarcerated	Unknown
<hr/>										
<u>Age</u>										
Up to 20 (106)	42%	10%	5%	16%	26%	42%	10%	11%	3%	33%
21-25 (192)	38	5	9	20	28	38	12	10	3	37
26-35 (83)	30	5	16	34	16	30	16	10	17	28
Over 35 (30)	17	7	33	23	20	17	27	13	13	30
Unknown (9)	44	0	11	0	44	44	0	0	0	56
<u>Ethnicity</u>										
White (324)	39	7	9	21	23	39	14	11	5	31
Minority (83)	31	4	19	25	20	31	11	10	13	35
Unknown (13)	8	0	0	0	92	8	0	0	0	92
<u>Employment Status</u>										
Student or										
Military (71)	54	6	6	20	15	54	11	13	1	21
Employed (107)	31	6	21	24	18	31	21	14	8	25
Unemployed (124)	40	11	10	31	7	40	17	13	11	19
Unknown (118)	26	3	6	9	56	26	3	3	2	66

**Table 10 Number of Drug Buys by Demographic Characteristics and
Prior Police Contact - BNDD**

	None	One	Two	Three or More
Total 413*	(205)	(114)	(51)	(43)
	50%	28%	12%	10%
<u>Age</u>				
Up to 20 (102)	45%	28%	18%	9%
21-25 (191)	52	27	12	9
26-35 (81)	43	32	7	17
Over 35 (30)	63	23	7	7
Unknown (9)	0	0	0	0
<u>Ethnicity</u>				
White (320)	48	28	13	12
Minority (93)	56	28	10	6
<u>Employment Status</u>				
Student or Military (71)	35	27	24	14
Employed (107)	55	29	7	9
Unemployed (119)	45	29	12	15
Unknown and N. A. (116)	59	26	11	4
<u>Occupational Status</u>				
Student or Military (74)	38	27	22	14
Blue Collar (87)	52	26	8	14
White Collar (63)	51	30	10	10
Artisan, etc. (26)	38	38	15	8
Other, Unknown or None (163)	55	26	11	8
<u>Prior Arrest Record</u>				
No Previous Arrest (150)	51	27	13	9
One Drug Arrest Only (27)	37	22	26	15
One nondrug Arrest Only (45)	40	36	7	18
More than one Arrest (89)	37	31	16	16
Unknown (102)	66	23	8	4
<u>Scope of Prior Contact</u>				
No Prior Record (150)	51	27	13	9
Arrested; Not Convicted (54)	46	26	15	13
Convicted; Not Incarcerated (44)	18	41	16	25
Convicted and Incarcerated (26)	46	31	8	15
Unknown (139)	60	24	11	6

* Investigated Arrestees

Table 10 shows the relationship between demographic characteristics and scope of investigation. Neither ethnicity nor age is systematically related to scope of investigation. The data indicate that undercover purchases were most common among persons 26-to-35 (56%) and least common among persons over 35 (37%). Three or more buys were most frequently (17%) made from persons 26-to-35 (overall 10%).

Undercover purchases were more commonly made from students or servicemen (65%) than from unemployed persons (56%) or employed persons (45%). Two or more buys were also most common among students or military personnel (38%) and least common among employed persons (16%).

Prior record is also associated with scope of investigation. Undercover purchases were made least often from persons without any previous arrests¹ (49%) and most often from persons with one previous drug arrest (63%). Similarly, two or more buys were made least often from persons with no prior record (22%) and most often from persons with one previous drug arrest (41%) or more than one prior arrest (32%).

Drug Patterns. Table 11 shows the extent to which marihuana-related arrests involved other drugs as well as marihuana. The data suggest that most of the marihuana arrests were integrated with, and perhaps incidental to, investigation and apprehension of dealers in other drugs. Of the "buy" cases, 43% involved only marihuana or hashish, 26% involved marihuana or hashish and other drugs, and 31% involved only other drugs. Thus, marihuana was related to three out of 10 of the buy cases not because it was purchased but because it was seized from the arrestee at the time of arrest.

A similar pattern emerges in the cases in which no buys were made (the "seizure cases"). More than half (54%) involved other drugs as well as marihuana or hashish. Forty-two percent involved marihuana or hashish only.

The data indicate that LSD and cocaine were most often the "other drugs" involved, both in the

"buy" cases and the seizure cases. Heroin was rarely involved in either case.

Table 12 shows the drug patterns, in both buy and seizure cases, according to demographic characteristics. No systematic pattern is shown. The data do suggest that purchases from persons 21-to-25 were most likely to involve marihuana alone (53%) and least likely to involve other drugs alone (22%). Purchases from persons under 21, on the other hand, more often involved other drugs only (41%) and less often involved marihuana only (38%). With regard to prior police contact, purchases from individuals with no previous arrests more commonly involved marihuana only (48%) than did purchases from previously arrested persons (overall 43%).

Amounts of Marihuana Seized. Table 13 shows the amounts of marihuana possessed in buy cases and seizure cases. The data indicate that marihuana was seized at the time of arrest in 62% of the buy cases and in 96% of the seizure cases.² In 21% of the buy cases and 22% of the seizure cases, the amount seized was four ounces or less. One pound or less was involved in 28% of the buy cases and a third of the seizure cases. About one-tenth of both groups of cases involved between 16 ounces and five kilograms of marihuana. Finally, more than a pound of hashish or five kilograms of marihuana³ was seized at the time of arrest in 12% of the buy cases and 42% of the seizure cases.

Amount of marihuana seized is closely associated with the extent to which other drugs were involved in the case. In the buy cases, seizures following purchases of marihuana or hashish only were four times more likely to involve more than 16 ounces than they were to involve less than that amount (27% to 6%). However, when marihuana was but one of a number of drugs bought, the accompanying marihuana seizure involved four ounces or less twice as often as it did more than that amount (26% to 13%). Finally, when only other drugs were purchased, 16 ounces or less was seized more than twice as often as over that amount (58% to 23%).

Particularly noteworthy in this regard is the relative incidence of seizures of four ounces or less. One out of 14 marihuana-only buy cases in which

¹ Undercover purchases were made from only one-third of the persons for whom prior record information was unrecorded. Similarly, two or more buys were made from such persons in only 12% of these cases. This suggests either that these persons had no prior record or that such information was not sought because BNDD chose not to prosecute. Data presented later regarding disposition is consistent with the latter interpretation since persons for whom prior record was unavailable are disproportionately represented in the cases dropped or referred to state officials for prosecution.

² Table 13 suggests that in two of the cases in which only other drugs were bought, no marihuana was seized at all. Similarly, the data show that in nine (4%) of the "seizure cases," no marihuana or hashish was seized at the time of arrest. It is not clear why these cases were included in the sample unless the marihuana charges were based on non-buying activity occurring earlier in the investigation.

³ In subsequent analysis, the categories will be described only in terms of marihuana. The specified amounts of hashish are included by definition.

Table 11 - BNDD

Drug Patterns

Relationship Between Drugs

	<u>Buy</u> <u>Cases</u> (208)	<u>Seizure</u> <u>Cases</u> (205)	
MARIHUANA OR HASHISH ONLY	43%	42%	
MARIHUANA OR HASHISH AND OTHER DRUGS	26	54	
<u>Narcotics</u>			10
Heroin	1		
Cocaine	5		
<u>Dangerous Drugs</u>	4		15
<u>Hallucinogens</u>	12		15
<u>More than one Category</u>	5		14
OTHER DRUGS ONLY	31	4	

Drugs Bought

	<u>First Buy</u> (208)	<u>Second Buy</u> (94)	<u>Third Buy</u> (43)
Marihuana	52%	38%	42%
Hashish	5	10	5
<u>"Narcotics"</u>			
Heroin	5	10	9
Cocaine	20	19	19
<u>"Dangerous Drugs"</u>			
Amphetamines	2	6	5
Methamphetamines	3	3	0
Barbiturates	3	4	0
<u>"Hallucinogens"</u>			
LSD	19	27	40
Other Hallucinogens	2	2	0

some additional marihuana was seized at the time of arrest, involved four ounces or less. But this amount was involved in at least 58% of the cases in which marihuana was one of a number of drugs purchased and was also seized at the time of arrest. Finally, four ounces or less were seized in more than 40% of the cases in which only other drugs were bought.

The overall pattern in the buy cases, then, is that the marihuana seizure was generally incidental in cases in which other drugs were bought. In those cases in which the undercover activity was

directed toward marihuana alone, the seizure accompanying arrest was more likely to be an integral part of the evidence-gathering.

In the seizure-only cases, a similar pattern emerges. When marihuana was the only drug seized, the amount involved was rarely under five kilograms of marihuana or a pound of hashish. In but 8% of the cases was there less than four ounces seized. The data indicate, however, that marihuana generally plays an ancillary role in cases in which other drugs are also seized. In over a third (35%) of these cases, the amount of mari-

Table 12 Drug Patterns and Demographic Characteristics - BNDD

	Buy Patterns			Seizure Patterns			
	(90) 43%	(54) 26%	(64) 31%	Total (205) (Seizure Cases)	(86) 42%	(110) 54%	(9) 4%
	Marihuana or Hashish	Marihuana or Hashish and Other Drugs	Other Drugs Only		Marihuana or Hashish	Marihuana or Hashish and Other Drugs	Unknown
Total (208) (Buy Cases)							
Age							
Up to 20 (56)	38%	21%	41%	(46)	43%	57%	0%
21-25 (91)	53	25	22	(100)	41	55	4
26-35 (46)	35	28	37	(35)	37	57	6
Over 35 (11)	36	36	27	(19)	42	42	16
Unknown (4)	25	50	25	(5)	80	20	0
Ethnicity							
White (167)	42	28	30	(153)	43	54	3
Minority (41)	46	20	34	(52)	38	54	8
Employment Status							
Student or Military (46)	39	37	24	(25)	40	60	0
Employed (48)	46	23	31	(59)	37	56	7
Unemployed (66)	44	26	30	(53)	32	60	8
Unknown (48)	44	19	38	(68)	54	44	1
Prior Arrest Record							
No Previous Arrests (73)	48	26	26	(77)	34	64	3
One Drug Arrest Only (17)	47	24	29	(10)	20	80	0
One Nondrug Arrest Only (27)	33	41	26	(18)	50	39	10
More than One Arrest (56)	39	25	36	(67)	24	67	9
Unknown (35)	46	17	37		61	36	3
Scope of Prior Contact							
No Prior Record (73)	48	26	26	(77)	34	64	3
Arrested, Not Convicted (29)	48	21	31	(25)	39	61	0
Convicted, Not Incarcerated (36)	42	36	22	(8)	44	33	22
Convicted and Incarcerated (14)	21	29	50	(11)	15	62	23
Unknown (56)	41	21	38	(81)	54	43	2

Table 13 Amount Possessed by Buy Patterns and
Seizure Patterns - BNDD

Amount of Marihuana Possessed						
Total Buy Cases (208)	(80) 39%	(43) 21%	(14) 7%	(21) 10%	(25) 12%	(25) 12%
	None	4 oz. or less of Marihuana or Hashish	Between 4 and 16 oz. of Marihuana or Hashish	Between 16 oz. and 5 Kg. of Marihuana	More than 5 Kg. of Marihuana; More than 16 oz. Hash.	Amount Unknown
Marihuana or Hashish Only (90)	53%	4%	2%	18%	9%	13%
Marihuana or Hashish and Other Drugs (54)	56	26	0	2	11	6
Other Drugs Only (64)	3	39	19	6	17	16

Amount of Marihuana Possessed						
Total Seizure Cases (205)	(46) 22%	(22) 11%	(23) 11%	(87) 42%	(18) 9%	(9) 4%
	4 oz. or less of Marihuana or Hashish	Between 4 and 16 oz. of Marihuana or Hashish	Between 16 oz. and 5 Kg. of Marihuana	More than 5 Kg. of Marihuana; More than 16 oz. Hash.	Amount Unknown	Other Drugs No Marih. or Hashish
Marihuana or Hashish Only (86)	8%	6%	2%	83%	1%	0
Marihuana and Other Drugs (110)	35	15	19	15	15	0
Other Drugs Only (9)	0	0	0	0	0	100

huana seized was four ounces or less. Conversely, more than five kilograms were seized in 15% of the multi-drug cases.

Table 14 shows the relationship between demographic characteristics and amount of marihuana possessed in seizure cases. No systematic pattern emerges, although the number of cases is too small to permit meaningful analysis. The data do suggest that seizure of more than five kilograms was more common among younger arrestees than among their elders. With regard to prior police contact, the data suggest that seizures of four ounces or less were considerably more common among persons with more than one previous arrest

(45%) or one non-drug arrest (39%) than among persons with no previous arrests (26%).

Amounts of Marihuana Bought. The data in Table 15 indicate that the amount of marihuana purchased by BNDD undercover agents is related to the involvement of other drugs in the same way as amount of marihuana possessed was related to purchase or seizure of other drugs. Four ounces or less of marihuana or hashish was bought in 30% of the buy cases. However, purchases of this small amount were about five times more common in cases in which other drugs were also bought than in cases in which marihuana was bought alone (58% to 12%). Conversely, three-quarters (76%)

Table 14 Amount Possessed by Demographic Characteristics,
Prior Arrest Record and Contacts - BNDD

	Up to 4 oz. of Marihuana or Hashish (46) 22%	Between 4 and 16 oz. of Marihuana or Hashish (22) 11%	Between 16 oz. and 5 Kg. of Marihuana (23) 11%	More than 16 oz. of Hashish or more than 5 Kg. of Marihuana (87) 42%	Amount Unknown (18) 9%	Other Drugs - No Marihuana or Hashish (9) 4%
Total (205)						
Age						
Up to 20 (46)	24%	11%	11%	50%	4%	0%
21-25 (100)	19	16	10	11	40	4
26-35 (35)	29	3	14	37	11	6
Over 35 (19)	26	0	16	42	0	16
Unknown (5)	20	0	0	60	20	0
Ethnicity						
White (153)	20	13	10	43	10	3
Minority (52)	31	4	13	40	4	8
Employment Status						
Student or Military (25)	36	16	12	36	0	0
Employed (59)	20	7	15	41	10	7
Unemployed (53)	26	6	13	38	9	8
Unknown (68)	16	16	6	50	10	1
Prior Arrest Record						
No Previous Arrest (77)	26	14	13	35	9	3
One Drug Arrest						
Only (10)	20	0	30	50	0	0
One Non-drug Arrest						
Only (18)	39	0	0	44	6	11
More than One Arrest (33)	45	6	18	21	0	9
Unknown (67)	3	13	6	60	15	3
Scope of Prior Contact						
No Prior Record (77)	26	14	13	35	9	3
Arrested; Not Convicted (25)	24	0	24	44	0	8
Convicted; Not						
Incarcerated (8)	38	0	12	38	0	12
Convicted and						
and Incarcerated (12)	50	0	17	17	0	17
Unknown (83)	13	13	5	53	13	2

Table 15 Amount Bought by Buy Patterns, Demographic Characteristics
and Prior Police Contact - BNDD

	Up to 4 oz. of Marih. or Hashish	Between 4 and 16 oz. of Marih. or Hashish	Between 16 oz. and 5 Kg. of Marihuana	More than 16 oz. of Hashish or over 5 Kg. of Marih.	Amount Unknown
Total (134)	(40) 30%	(15) 11%	(29) 22%	(49) 37%	(1) 1%
<u>Traffic Pattern</u>					
Buys of Marihuana or Hashish Only (82)	12%	11%	26%	50%	1%
Marihuana or Hashish and other drugs (52)	58	12	15	15	0
<u>Age</u>					
Up to 20 (30)	30	23	23	23	0
21-25 (67)	22	9	27	40	1
26-35 (27)	41	7	7	44	0
Over 35 (8)	38	0	25	38	0
Unknown (2)	100	0	0	0	0
<u>Ethnicity</u>					
White (114)	29	12	21	37	1
Minority (20)	35	5	25	35	0
<u>Employment Status</u>					
Student or Military (35)	43	17	14	26	0
Employed (30)	37	10	30	23	0
Unemployed (46)	20	9	15	54	2
Unknown (23)	22	9	35	35	0
<u>Prior Arrest Record</u>					
No previous arrests (51)	33	14	18	35	0
One drug arrest only (12)	17	8	42	25	8
One non-drug arrest only (20)	40	5	15	40	0
More than one arrest (35)	29	3	20	49	0
Unknown (16)	19	31	31	19	0
<u>Scope of Prior Contact</u>					
No prior contact (51)	33	14	18	35	0
Arrested; not con- victed (19)	21	5	26	47	0
Convicted; not incarcerated (28)	36	7	25	32	0
Convicted and incarcerated (7)	14	0	0	86	0
Unknown (29)	28	17	28	24	3

of the marihuana-only buys involved a pound or more compared to 30% of the multi-drug cases. Finally, half of the marihuana-only cases involved more than five kilograms compared to 15% of the multi-drug cases.

The data demonstrate that the marihuana buy plays an ancillary role in cases in which it was not the only drug purchased.

Table 15 also shows the relationship between amount bought and demographic characteristics of the arrestees. With regard to age, ethnicity and prior police contact, the size of the sample is too small to permit meaningful comparisons. With regard to employment status, however, a pattern does seem to emerge. Buys of four ounces or less were more common among students or servicemen (43%) and employed persons (37%) and less common among unemployed persons (20%). Conversely, buys of more than five kilograms were more common among unemployed persons (54%) and less common among students and servicemen (26%) and employed persons (23%).

Physical Location of Arrest. The top panel of Table 16 shows that a substantial majority (65%) of the BNDD arrests were made in private residences or other private buildings. Seven percent of the arrests were made at travel locations. Most of the remaining arrests were made in the street (14%) or other public areas (7%). The arrestee was rarely in a motor vehicle at the time of arrest (3%).

Data in the bottom panel of Table 16 show that indoor arrests were somewhat more common in cases involving only a seizure (70%) than in cases involving undercover purchases (63% and 53%). Conversely, "outdoor" arrests were considerably more common in buy cases (34% to 47%) than in seizure cases (17%). The data thus confirm the fact that BNDD possession arrests are not of the harassment, public variety found at the state level. (There were seven BNDD spontaneous arrests, five of which occurred outdoors and two of which occurred at travel locations.)

Neither age nor ethnicity is systematically associated with location of arrest, although the 26-to-35 year old arrestees were less likely to be arrested indoors (54% compared to 65% overall) and more likely to be arrested outdoors (37% compared to 27% overall) than other arrestees.

Table 16 does suggest that location of arrest is associated with amount of marihuana possessed in the seizure-only cases. When less than five kilograms was seized, the arrests were generally indoors (73% to 87%). However, seizures of more than five kilograms were considerably less likely

to occur indoors (55%) and considerably more likely to occur at travel locations (22% compared to 13% overall) and outdoors (23% compared to 15% overall).

Use of Warrants

Table 17 shows that in the 413 investigated cases, search warrants only were used in 22%, arrest warrants only, were used in 12%, and both search and arrest warrants were used in 6%. Sixty percent of the arrests were effected without the use of warrants.

Disposition

Disposition of federal cases will be analyzed in two phases. The first phase—"The initial disposition"—describes the decision by BNDD whether or not to prosecute for marihuana offenses at the federal level. At this stage the case may be dropped altogether or referred to state enforcement agencies for prosecution. Or the case may be prosecuted at the federal level but the defendant may not be charged with any marihuana offenses. For those defendants charged with marihuana offenses at the federal level, the cases will be further analyzed in terms of "the ultimate disposition" of the individual charges and of the entire case. Because of the small number of cases, the refined analysis employed in the state study—in terms of the procedural phases of the criminal justice system—was not suitable here.

INITIAL DISPOSITION

Table 18 shows that less than half (47%) of the marihuana-related arrests resulted in federal prosecutions. Fifty-two percent of the cases were either dropped (10%) or referred to the states for prosecution (42%). Of the 196 persons prosecuted at the federal level, 75 or 38% (18% of all arrestees) were not charged with any marihuana offenses.

The data in Table 18 indicate that initial disposition varied according to certain demographic characteristics of the arrestee. Cases against arrestees 25 or under were more likely to be dropped (12%) than cases against arrestees 26 or over (4% and 7%), and were less likely to be prosecuted at the federal level (44% compared to 55% and 53%). The proportion of cases referred to states for prosecution was similar for all groups (overall 42%). Although initial disposition did not vary significantly according to race, only 28% of the female arrestees were prosecuted at the federal

Table 16 Physical Location of Arrest - BNDD

<u>Location of Arrest</u>		
Total (420)		
Private residence, office or other "private" building	65%	
Travel Locations	7	
Airport or airplane		6
Dock or other shipping point		1
Railroad station or bus terminal		1
Border station	*	
Indoor public area	3	
Street, road, public thoroughfare	14	
Other outdoor public area	4	
Unknown	7	

Use of Motor Vehicle

Yes	3
No	92
Unknown	4

Location of Arrest by Circumstances of Arrest and Demographic Characteristics of the Arrestee

	Private Residence	Travel Locations or Border Station	"Outdoors" or Unknown
Total (420)	(274) 65%	(32) 8%	(114) 27%
<u>Number of Buys</u>			
None (212)	70%	14%	17%
One (114)	63	3	34
Two (51)	63	0	37
Three or more (43)	53	0	47
<u>Age</u>			
Up to 20 (106)	72	9	19
21-25 (192)	63	7	31
26-35 (83)	54	8	37
Over 35 (30)	83	7	10
Unknown (9)	78	11	11
<u>Ethnicity</u>			
White (324)	65	6	28
Minority (96)	66	10	24
Total Seizure	(147)	(27)	(31)
Cases (205)	71%	13%	15%
<u>Amount Seized</u>			
4 ounces or less of Marihuana or Hashish (46)	83	6	11
Between 4 and 16 ounces of Marihuana or Hashish (22)	73	14	14
Between 16 ounces and 5 kilograms of Marihuana (23)	87	4	9
More than 5 kilograms of Marihuana or 16 ounces of Hashish (87)	55	22	23
Amount unknown (18)	100	0	0
No Marihuana or Hashish (9)	72	13	15

Table 17 Use of Warrants - BNDD

Total (413)

Use of Warrants

Search warrant only	22
Arrest warrant only	12
Both search and arrest warrants	6
None	60

Search Warrant

Not used	64
Used	29
Described "narcotic" drugs or similar general language	4
Described marihuana or hashish only	9
Described other specified drugs but not marihuana or hashish	7
Specified several drugs including marihuana or hashish	9
Description unknown	1
Unknown whether used	6

Arrest Warrant

Not used	79
Used	18
Described present offense	14
Described prior offense	5
Unknown	3

level, compared to 49% of the males. Compared to males, females more commonly had their cases dropped (19% to 9%) or referred to the states (53% to 41%).

Initial disposition was also associated with the employment status of the arrestee. Cases against students or military personnel were more often dropped or referred to the states (55%) than cases against employed persons (44%) or unemployed persons (39%). Conversely, cases against students or servicemen were less likely to be prosecuted at the federal level (41%) than cases against employed persons (56%) or unemployed persons (60%).⁴

Table 18 also indicates that prior police contact is associated with initial disposition. Persons with no prior arrests had their cases dropped or referred to the states considerably more often (57%) than persons with one prior drug arrest (37%),

⁴Cases against persons for whom employment status was unrecorded (28% of the cases) were dropped (15%), and referred to the states (58%) proportionately more often than the other groups. Only 27% of these arrestees were prosecuted at the federal level. This suggests that absence of the data may be in part a function of the fact that the federal authorities were uninterested in the case.

one prior non-drug arrest (26%) or more than one previous arrest (23%).⁵ Of the 196 defendants prosecuted at the federal level, comparison of percentages in the table show that marihuana dropped out of the case considerably more often among persons with more than one previous arrest (50%) than among persons with no prior arrests (34%), one previous drug arrest (30%) or one previous non-drug arrest (29%).

Initial disposition did not vary systematically according to scope of prior record, but similar comparisons indicate that previously incarcerated federal defendants were more likely to be charged with nonmarihuana offenses only (71%) than persons previously convicted but not incarcerated (35%) or persons previously arrested but not convicted (28%).

Table 19 shows the relationship between initial disposition and case patterns and the amounts of marihuana involved. The first panel shows that seizure-only cases were more commonly dropped (17%) than buy cases (3%) and were also more commonly referred to the states for prosecution (47%) than buy cases (38%). Put another way, about a third (34%) of the seizure cases were ultimately prosecuted at the federal level, compared to well over half (58%) of the buy cases. The data also indicate that cases involving three or more buys were considerably more likely to be prosecuted by BNDD (75%) than cases involving one buy (56%) or two buys (51%).

The second panel of Table 19 presents data concerning the seizure cases, and indicates that initial disposition varied according to involvement of other drugs and amount of marihuana possessed. Cases involving seizures of marihuana and hallucinogens were dropped (42%) more often than cases involving marihuana and narcotics (30%), marihuana and dangerous drugs (17%), marihuana or hashish only (10%) or marihuana and a combination of other drugs (7%). Prosecution by BNDD was somewhat more common in cases involving marihuana and combinations of other drugs (41%) and marihuana and narcotics (40%) than in cases involving marihuana or hashish only (35%) or marihuana and hallucinogens (33%). BNDD prosecutions were least often brought in cases involving marihuana and dangerous drugs (7%); more than three fourths (77%) of these cases were referred to the states.

Amount seized is also related to initial disposition.

⁵Once again, cases against persons for whom prior record information was unrecorded were more often dropped (16%) or referred to the states (70%) than cases against any other group. Only 12% of these cases were prosecuted at the federal level.

Table 18 Initial Disposition by Demographic Characteristics and
Prior Police Contact - BNDD

	Case Dropped (43) 10%	Referred to the State (177) 42%	Prosecuted by BNDD; No Marihuana or Hashish Charge (75) 18%	Prosecuted by BNDD; Marihuana or Hashish Charge (121) 29%	Unknown (4) 1%
Total (420)					
Age					
Up to 20 (106)	12%	43%	22%	22%	1%
21-25 (192)	12	42	12	32	2
26-35 (83)	4	41	26	29	0
Over 35 (30)	7	40	20	33	0
Unknown (9)	22	56	0	22	0
Ethnicity					
White (324)	9	43	17	30	1
Minority (96)	14	39	22	25	1
Sex					
Male (362)	9	41	18	31	1
Female (57)	19	53	18	10	0
Unknown (1)	0	0	0	100	0
Employment Status					
Student or Military (71)	11	44	14	27	4
Employed (107)	5	39	20	36	0
Unemployed (124)	10	29	24	36	1
Unknown (118)	15	58	12	15	0
Occupational Status					
Student or Military (74)	11	42	15	28	4
Blue Collar (90)	3	37	22	38	0
White Collar (63)	11	32	22	35	0
Artisan, etc. (26)	4	35	35	27	0
Other, Unknown, None (167)	14	50	13	22	1
Prior Arrest Record					
No previous arrests (152)	10	47	14	28	0
One drug arrest only (27)	0	37	18	44	0
One non-drug arrest only (46)	6	20	22	52	0
More than one arrest (90)	9	14	38	38	1
Unknown (105)	16	70	4	8	3
Scope of Prior Contact					
No prior record (152)	10	47	14	28	0
Arrested; not convicted (55)	0	29	20	51	0
Convicted; not incarcerated (44)	2	14	30	54	0
Convicted and incarcerated (26)	15	15	46	19	4
Unknown (143)	16	55	12	15	2

tion. Three out of 10 of the cases involving less than five kilograms were dropped, compared to less than one out of 10 (8%) of the cases involving more than five kilograms. This data also confirms the relationship between small seizures (four ounces or less) and involvement of other drugs. Cases involving the intermediate amounts (between four ounces and five kilograms) were dropped or referred to the states more frequently than cases involving more than five kilograms (77% and 78% to 63%). Yet only about half (52%) of the cases involving four ounces or less were dropped or referred to states. This apparent anomaly is explained by the data regarding charges brought against the federal defendants.

Almost all of the federal defendants possessing more than five kilograms were charged with marihuana offenses. Data not shown indicate that about 60% of the federal defendants possessing the intermediate amounts were charged with marihuana offenses. But only 36% of the federal defendants possessing four ounces or less were charged with marihuana offenses.

The bottom two panels of Table 19 present data concerning initial disposition in the 208 buy cases. The data indicate that cases were more often prosecuted by BNDD when other drugs were bought than when only marihuana was bought (70% and 64% compared to 47%). As in the seizure cases, BNDD tended not to charge marihuana offenses in

Table 19 Initial Disposition by Circumstances of Arrest - BNDD

	Case Dropped	Referred to the State	Prosecuted by BNDD; No Marihuana or Hashish Charge	Prosecuted by BNDD; Marihuana or Hashish Charge	Unknown
Total (413)	(42) 10%	(176) 42%	(73) 18%	(118) 29%	(4) 1%
Seizure only cases (No buys) (205)	17%	47%	10%	24%	1%
Buy cases (208)	3	38	25	33	*
1 Buy (114)	5	39	18	38	1
2 Buys (51)	2	47	24	27	0
3 or more Buys (43)	0	26	49	26	0
Total Seizure Cases (205)	(35) 17%	(97) 47%	(20) 10%	(50) 24%	(3) 1%
<u>Seizure Patterns</u>					
Marihuana or Hashish Only (86)	10%	51%	1%	34%	3%
Marihuana and Narcotics Only (20)	30	30	30	10	0
Marihuana or Hashish and Dangerous Drugs Only (30)	17	77	0	7	0
Marihuana or Hashish and Hallucinogens Only (31)	42	26	10	23	0
Marihuana or Hashish and Combination (29)	7	52	34	7	0
Unknown (9)	0	11	0	89	0
<u>Amount Possessed</u>					
Up to 4 oz. Marihuana or Hashish (46)	28	24	30	17	0
Between 4 and 16 oz. Marihuana or Hashish (22)	32	45	9	14	0
Between 16 oz. and 5 Kg. Marihuana (23)	30	48	9	13	0
More than 16 oz. Hashish or 5 Kg. Marihuana (87)	8	55	1	32	3
Unknown (18)	6	89	6	0	0
No Marihuana or Hashish (9)	0	11	0	89	0
Total Buy Cases (208)	7) 3%	(79) 38%	(53) 25%	(68) 33%	(1) *
<u>Buy Patterns</u>					
Buys of Marihuana or Hashish Only (90)	4%	48%	0%	47%	1%
Buys of Marihuana or Hashish and Other Drugs (54)	2	28	35	35	0
Buys of Others Only; No Marihuana or Hashish (64)	3	33	53	11	0
Total Marihuana Buy Cases (134)	(4) 3%	(49) 37%	(19) 14%	(61) 46%	(1) *
<u>Amount Bought</u>					
Up to 4 oz. of Marihuana or Hashish (40)	2 %	30%	40%	28%	0%
Between 4 and 16 oz. Marihuana or Hashish (15)	0	80	7	13	0
Between 16 oz. and 5 Kg. Marihuana (29)	0	38	0	62	0
Over 16 oz. Hashish or Over 5 Kg. Marihuana (49)	6	29	4	59	2
Unknown (1)	0	0	0	100	0

the multidrug cases which it chose to prosecute. Half of the federal defendants from whom marihuana and other drugs were bought were not charged with any marihuana offenses. Data not shown indicate that among those federal defendants who sold only other drugs but from whom marihuana was seized at the time of arrest, only 17% were charged with marihuana offenses.

Finally, the data in Table 19 show that in the 134 cases in which marihuana was purchased, the amount bought was associated with initial disposition in the same way as amount seized was associated with disposition in the seizure cases. Six out of 10 of the cases involving purchases of the larger amounts (over 16 ounces) were prosecuted at the federal level, where marihuana offenses were generally charged (100% and 94%).⁶

Sixty-eight percent of the cases involving purchases of small amounts (four ounces or under) were prosecuted at the federal level; however, the ancillary role of the marihuana buy in these cases is illustrated by the fact that 60% of the federal defendants were not charged with any marihuana offenses.

ULTIMATE DISPOSITION

Of those persons charged with marihuana offenses at the federal level (29% of the original arrestees), one-fifth were not convicted of any offense. Over half (51%) were convicted, of whom 45% were incarcerated. Put another way, of the 420 persons initially arrested for marihuana-related offenses by BNDD in 1970, 29% were ultimately charged with marihuana offenses by BNDD, 15% were ultimately convicted in federal court and 7% were ultimately incarcerated. (Twenty-nine percent of the prosecutions involving marihuana offenses were pending at the time of data collection or the disposition was unknown.)

Table 20 shows the specific marihuana offenses with which the 121 federal defendants were charged and the dispositions of each charge. The most common charges were delivery and possession. Sixty percent of these defendants, 73 persons, were charged with at least one count of delivery of marihuana. Forty percent were charged with at least one count of possession of marihuana. Lesser proportions were charged with conspiracy (17%), importation (13%), smuggling (6%) or other marihuana offenses (17%).

Of those charged with delivery, 26% were charged with this offense alone. About three-

fourths of the persons charged with delivery were charged with one additional offense (38%) or two or more additional offenses (36%). A similar multiple-charge pattern is shown with respect to possession. Twenty-three percent of the 48 persons charged with possession were charged with this offense alone. The remaining persons were charged with one additional offense (40%) or two or more additional offenses (38%).

Table 20 also shows the ultimate disposition of the various charges. Among defendants charged with delivery alone, 53% were convicted and 11% were not convicted (37% of these cases were still pending). However, when sale was one of two offenses, only 18% were convicted of this offense and 79% were not convicted. Finally, when sale was one of three offenses charged, none of the defendants were convicted of this offense (88% not convicted).

The reverse pattern was indicated with regard to possession charges. When possession was the only charge, 36% of the defendants were convicted. But when possession was one of two charges, 58% were convicted of this offense (47% were incarcerated for possession), and when possession was one of three offenses charged, 50% were convicted of this offense (17% were incarcerated for possession).

Although the number of federal marihuana prosecutions was too small to warrant detailed analysis, it appears that the possession offense played a major role in the process of plea-bargaining. In multicharge cases, defendants apparently pleaded guilty to possession in return for dismissal of delivery charges.

The data in Table 21 show the relationship between ultimate case disposition and demographic characteristics and prior arrest records of federal defendants charged with marihuana offenses. Where the numbers of cases are large enough to warrant analysis, no variations are shown.

CUSTOMS

The functions of the Bureau of Customs, housed within the Treasury Department, are manifold. Only a relatively small proportion of Customs resources are devoted to interdicting smuggling of illicit drugs.

Two kinds of Customs officials are involved in the interdiction effort. A small force of investigators or agents tracks suspicious packages upon arrival in this country to their ultimate destinations, thereby hoping to break large smuggling rings. Customs inspectors, on the other hand, are responsible for inspecting all people entering the United States by land, air or sea. Regular Customs

⁶ Twelve out of the 15 cases involving purchases of between four and 16 ounces were referred to the states. The number is too small to warrant further analysis.

Table 20 - Ultimate Disposition of Specific Marihuana Charges - BNDD

Total Federal Prosecutions Involving Marihuana Charges-(121)	Incarcerated For at least One offense (28) 23%	Convicted of at least One Offense; Not Incarcerated (34) 28%	Not Convicted of any offense (24) 20%	Pending; Unknown (35) 29%
	Incarcerated for this offense	Convicted, but Not Incarcerated for this offense	Not Convicted of this offense	Pending or Unknown
Offense				
Delivery (73)				
Only Charge Case (19)	0%	53%	11%	37%
2 Charge Cases (28)	14	4	79	4
3 + Charge Cases (26)	0	0	88	12
Possession (48)				
Only Charge (11)	0	36	27	36
2 Charge Cases (19)	47	11	32	11
3 + Charge Cases (18)	17	33	33	17
Smuggling (7)				
Only Charge (5)	40	60	0	0
2 Charge Cases (2)	0	0	0	100
3 + Charge Cases (0)	0	0	0	0
Importation (16)				
Only Charge (3)	0	0	33	67
2 Charge Cases (10)	20	0	40	40
3 + Charge Cases (3)	0	0	0	100
Conspiracy (20)				
Only Charge (9)	22	0	0	78
2 Charge Cases (7)	29	0	71	0
3 + Charge Cases (4)	0	25	75	0
Other Offense (22)				
Only Charge (8)	0	25	63	13
2 Charge Cases (11)	0	36	9	55
3 + Charge Cases (3)	0	33	0	67

inspectors often uncover contraband in the course of a routine search. Also, Customs has computerized information on persons and vehicles sought by various law enforcement agencies and this data bank is utilized at ports and borders to locate smugglers and other criminals.

All persons entering the U.S. are temporarily, until cleared, within the constructive custody of the appropriate Customs officials. For this reason,

Customs inspectors have extensive authority to conduct searches of persons and packages. The standard for a permissible search is much more flexible than the "probable cause" required of most law enforcement officials.

In addition to the border searches just described, Customs also sets up checkpoints many miles into the U.S., hoping to further reduce illicit smuggling. Here the standards for search are equivalent to those for other law enforcement officials.

Enforcement Trends

Table 22 presents Customs estimates of the number of marihuana arrests made by that Bureau between 1960 and the present. Until 1968, Customs did not keep any statistics whatsoever on its arrests. Sources at the Bureau estimate that prior to that time 60% of Customs arrests were for drug offenses. Even today, Customs does not keep separate figures on marihuana arrests as opposed to drug arrests in general. (At the inception of the Commission's study, agency sources attributed 75% of Customs drug arrests to marihuana and hashish smuggling. The Commission's own collec-

Table 21 Ultimate Case Disposition By Demographic Characteristics and Prior Arrest Record of Federal Defendants - BNDD

Total - 121	Incarcerated (28) 23%	Convicted Not Incarcerated (34) 28%	Not Convicted (24) 20%	Pending; Unknown (35) 29%
Age				
Up to 20 (23)	26%	39%	22%	13%
21-25 (62)	21	32	18	29
26-35 (24)	12	21	29	38
Over 35 (10)	60	0	0	40
Unknown (2)	0	0	50	50
Ethnicity				
White (97)	23	30	20	28
Minority (24)	25	21	21	33
Sex				
Male (114)	23	27	20	30
Female (6)	33	33	17	17
Unknown (1)	0	100	0	0
Prior Arrest Record				
No Previous Arrests (43)	28	28	16	28
One Drug Arrest Only (12)	17	42	17	25
One Bondrug Arrest Only (24)	25	21	21	33
More than One Arrest (34)	24	24	26	26
Unknown (8)	0	50	12	38

TABLE 22

U. S. CUSTOMS MARIHUANA AND HASHISH ARRESTS
1960 TO PRESENT

Fiscal Year	Estimated No. of Arrests	% Change
1960*	592	
1961*	667	12.66
1962*	643	-3.59
1963*	714	11.04
1964*	810	13.44
1965*	992	22.46
1966*	1,134	14.31
1967*	1,518	33.86
1968**	2,377	56.58
1969**	3,242	36.39
1970**	4,582	41.33
1971**	7,681	67.63

* Until 1968, no separate record of drug arrests was maintained. This data was compiled on the basis of a Customs estimate that marihuana arrests constituted approximately 45% of all Customs arrests.

** Even since 1968 when separate drug statistics were begun, no separate record of marihuana or hashish arrests has been kept. This data was compiled on the basis of a Customs estimate that marihuana and hashish arrests account for 75% of all drug arrests made by Customs officials during these years.

tion of the data indicates that the figure is about 50%.)

Although these figures represent estimates, the yearly rate of increase corresponds to the other federal enforcement statistics. The increase in marihuana seizures by Customs, illustrated in Table 23, reflects the extent to which smuggled marihuana rather than the domestic variety supplies increasing domestic demand for the drug.

The remainder of this section presents findings regarding the approximately 3000 arrests made by Customs officials for marihuana-related activity during calendar year 1970. On the basis of a selection of one out of every six arrests, the Commission prepared a sample of 491 cases for analysis.

The Arrestees

Demographic Characteristics. The typical Customs arrestee is a white, single male, between the ages of 21 and 25, who is employed in a blue collar job.

The data in Table 24 indicate that 17 out of 20 Customs arrestees were male, and three out of four were under 26. One-fourth were married at the time of arrest, two out of seven were ethnic minorities and one out of seven were not U.S. citizens.

Data on occupational and employment status of the arrestees were more complete in the regional Customs files than in the records of the other federal agencies. These data show that almost a third (31%) of the arrestees were in school or in the

military. Less than three in 10 were unemployed. The remainder (37%) were employed at the time of their arrest. With regard to occupation (whether or not the arrestees were employed at the time of arrest), most were blue collar workers (33%). Small percentages were in sales or clerical jobs (6%), trained technical work (3%), managerial occupations (4%), artistic endeavors (2%) or in the professions (2%).

Prior Police Contact. Data regarding the prior police contact of the Customs arrestees appear in Table 25. Information was completely unavailable in almost half (46%) of the cases. In cases where data was available, two-thirds of the arrestees had no previous arrests. Six percent had only one drug arrest, 9% had one nondrug arrest and 19% had been arrested more than once.

Dispositions of persons previously arrested were available in only 75 cases. Judging from available data, however, only 9% of the Customs arrestees had been previously convicted and one out of 20 had been previously incarcerated.

Because of the small size of the group for which information was recorded, it is not possible to relate with assurance the scope of prior contact to demographic variables. The data in Table 25 do suggest, however, that age may be associated with prior record. Eliminating unknowns, the 204 persons under 26 were considerably less likely to have prior arrests (27% and 29%) than persons over that age (52%). Similarly, where dispositional information was available, proportionately fewer persons 25 or under had been convicted (14% and 15%) or incarcerated (8% and 6%) than persons 26 and older (31% convicted, 20% incarcerated).

Circumstances of Detection and Arrest

Scope of Investigation. Customs arrests were generally spontaneous (81%). In a small number of cases (1%), the marihuana arrest resulted from a nondrug investigation. In the 18% of the cases involving a drug-related investigation, most were short-term (16%). Only 2% of the arrests were preceded by intensive investigative activity.

The data in Table 26 show that incidence of investigative activity generally does not vary with demographic differences among the arrestees. Arrests of unemployed persons were more likely to be preceded by investigation (28%) than arrests of students or military personnel (15%) or employed persons (14%); otherwise, there is little variation. With regard to prior arrest record, the data, also shown in Table 26, do suggest a relationship. Customs arrests of persons with more than one previous arrest were most likely (33%) to be preceded by investigation (18% overall).

TABLE 23

U. S. CUSTOMS MARIHUANA AND HASHISH SEIZURES
1960 TO PRESENT

FISCAL YEAR	MARIHUANA				HASHISH*			
	No. Seizures	% Change	Pounds	% Change	No. seizures	% Change	Pounds	% Change
1960	386		2,763					
1961	397	2.84	3,511	27.07				
1962	440	10.83	2,762	-21.33				
1963	470	6.81	1,927	-30.23				
1964	584	24.25	7,042	265.43				
1965	685	17.89	10,186	44.64				
1966	699	2.04	10,390	2.00				
1967	1,081	54.64	26,258	152.72				
1968	2,450	141.62	69,889	166.16	Not available		191	
1969	2,673	9.10	57,164	-18.20	186		623	226.17
1970	4,115	53.94	104,303	82.46	646	247.31	3,121	400.96
1971 (through May 16)	5,026	22.13	139,729	33.96	1,079	67.02	2,682	-14.06

*Until 1968, hashish seizure statistics were incorporated in the statistics on marihuana seizures.

Circumstances of Spontaneous Arrests. Table 27 shows that the reason almost always (86%) specified for a spontaneous arrest was "routine search or random check." Otherwise the most frequently recorded reason was that the Customs officer saw marihuana (4%).

The failure of Customs officers to record causes for suspicion, search and arrest is a function of the breadth of their power to search. Since no cause need to be shown in court, it is not shown in the record.

Circumstances of Investigative Arrests. In the 89 Customs arrests which were preceded by any drug-related investigative activity, marihuana (90%) or hashish (11%) was almost always one of the objects. Other drugs sometimes specified were cocaine (5%) and amphetamines (2%).

The data in Table 28 indicate that these investigations were triggered by information from varied sources. Tips from informants (41%), referral from other agencies (17%) and informa-

tion relayed within Customs itself (32%) accounted for most of the investigations. Data not shown demonstrate that both hashish (between 4 and 8 ounces) and marihuana (between one and 2.2 pounds) were bought in one case. Table 28 also indicates the extent to which search and arrest warrants were used. Search warrants, frequently specifying marihuana or hashish, were utilized in 26% of the cases, and arrest warrants were employed in 11%.

Physical Location of Arrest. The top panel of Table 29 shows that most (55%) of the Customs arrests were made at border stations or crossings, where the authority of Customs agents to search is great. An additional 13% of the arrests were made at points of travel, such as airports (10%) and docks (3%). Interestingly, 12% of the Customs arrests occurred in private residences or other private buildings. In about two-thirds (64%) of the cases, the arrestee was in a vehicle at the time of apprehension.

Table 24

**Demographic Characteristics of Customs Arrestees
Compared with BNDD Arrestees**

	<u>Customs</u> 491	<u>BNDD</u> 420
Number of People		
<u>Nationality</u>		
U.S. Citizen	85%	83%
Alien	14	3
Unknown	*	14
<u>Age</u>		
Under 18	4	1
18 - 20	27	24
21 - 25	45	46
26 - 35	19	20
36 - 45	4	6
Over 45	*	1
Unknown	*	2
<u>Sex</u>		
Male	85	86
Female	15	14
Unknown	0	*
<u>Ethnicity</u>		
White	71	77
Black	12	6
Spanish speaking	16	12
Other	*	2
Unknown	*	3
<u>Marital Status</u>		
Single	65	38
Married	24	15
Separated	2	3
Divorced	4	2
Widowed	1	0
Unknown	4	41
<u>Employment Status</u>		
Student	21	15
Military	10	2
Employed	37	25
Unemployed	28	29
Retired	0	0
Unknown	4	28
<u>Occupation at Time of Offense</u>		
Student	21	16
Military	10	1
Skilled labor	5	4
Semi-skilled labor	10	4
Unskilled labor	13	8
Personal service	5	5
Sales or clerical	6	7
Artisan, craftsman, musician	2	6
Trained, technical	3	3
Managerial, proprietary	4	4
Professional	2	1
Other	4	2
Unknown	10	35
None	1	3

*Indicates less than one percent

The second panel of Table 29 shows that particular physical locations of arrest are not associated with demographic variables. Persons under 26 were somewhat less likely to be arrested at travel locations (9% and 11%) than older persons (17% and 21%) but were no more likely to be arrested at any other location. Table 8 does show that location of arrest is associated with scope of prior investigation. Investigative arrests were considerably more likely than spontaneous arrests to occur in private buildings (40% to 5%) and less likely to occur at border stations (13% to 64%).

Amount of Marihuana Seized. Table 30 illustrates the amounts of marihuana and hashish seized in connection with Customs arrests. Cannabis was the only drug involved in 86% of these cases. The remaining 14% of the arrestees possessed other drugs as well, most frequently amphetamines (5%).

About one-third of the cases involved an ounce or less of marihuana (28%) or hashish (6%). On the other hand, another third of the cases involved over five kilograms of marihuana (33%) or hashish (1%). For purposes of subsequent analysis, amounts seized will be grouped as follows: four ounces or less of either marihuana or hashish (37%); between four and 16 ounces of marihuana or hashish (8%); between 16 ounces and five kilograms of marihuana (17%); and more than five kilograms of marihuana or more than one pound of hashish (35%). The amount seized was unrecorded in 3% of the cases. (See Table 31.)

Table 31 shows that amount possessed varied according to certain demographic characteristics of the arrestees. Seizures of more than five kilograms of marihuana or one pound of hashish were less common among arrestees under 21 (28%) than among those 21-to-25 (32%), 26-to-35 (48%) or over 35 (67%). Similarly, seizures of four ounces or less of marihuana or hashish were more common among whites (41%) than among minorities (26%) while seizures of more than five kilograms were more common among minorities (46%) than among whites (31%). Four ounces or less were involved in arrests of employed persons (43%) and students or military personnel (38%) more often than in arrests of unemployed persons (26%). The converse is also true. More than five kilograms were involved in half (49%) of the arrests of unemployed persons, as compared to 28% of the student-military arrests and 32% of the arrests of employed persons.

Prior record is also associated with amount seized in the Customs cases. The data in Table 31 indicate that seizure of four ounces or less occurred more frequently among persons with no prior ar-

Table 25 Demographic Characteristics by Prior Arrest Record and Scope of Prior Contact - Customs

Total (491)	Prior Arrest Record					Scope of Prior Contact				
	(176)	(16)	(24)	(50)	(225)	(176)	(30)	(21)	(24)	(240)
	36%	3%	5%	10%	46%	36%	6%	4%	5%	49%
No Previous Arrests						No Prior Record	Arrested; Not Convicted	Convicted; Not Incarcerated	Convicted and Incarcerated	Unknown
Age										
Up to 20 (151)	37%	3%	3%	7%	49%	37%	4%	3%	4%	52%
21-25 (223)	40	3	6	7	43	40	7	5	3	44
26-35 (92)	29	3	4	21	42	29	6	5	9	50
Over 35 (24)	12	4	4	17	62	12	8	4	12	62
Unknown (1)	0	0	0	0	100	0	0	0	0	100
Ethnicity										
White (348)	39	3	5	9	43	39	6	4	4	47
Minority (140)	29	4	4	12	51	29	7	5	6	53
Unknown (3)	0	0	0	0	100	0	0	0	0	100
Employment Status										
Student or Military (151)	43	5	7	7	39	43	7	7	1	42
Employed (181)	33	2	4	10	51	33	5	3	7	52
Unemployed (136)	33	4	4	12	46	33	7	2	5	52
Unknown (23)	26	0	4	17	52	26	4	9	9	52

Table 26 Scope of Investigation by Demographic Characteristics and Prior Arrest Record - Customs

	Spontaneous or Non-Drug (402) (82%)	Drug Investigation (89) (18%)
Total - 491		
<u>Age</u>		
Up to 20 (151)	82%	18%
21-25 (223)	80	20
26-35 (92)	80	20
Over 35 (24)	100	0
Unknown (1)	100	0
<u>Ethnicity</u>		
White (348)	80	20
Minority (140)	85	15
Unknown (3)	100	0
<u>Employment Status</u>		
Student or Military (151)	85	15
Employed (181)	86	14
Unemployed (136)	72	28
Unknown (23)	87	13
<u>Prior Arrest Record</u>		
No Previous Arrest (176)	83	17
One Drug Arrest Only (30)	83	17
One Non-Drug Arrest Only (21)	81	19
More Than One Arrest (24)	67	33
Unknown (240)	82	18

Table 27

Reasons Specified for Spontaneous Arrests - Customs

Total Spontaneous Arrests (402)

Reasons

Routine Search or Random Check	86%
Officer Saw Marihuana	4
Subject Was Searched Incident to Another Arrest	1
Arrestee Made "Furtive Gesture"	2
Officer Saw Suspicious Container	2
Officer Saw Drug Paraphernalia	*
"Suspicious Behavior"	*
Other or Unknown	6

* Indicates less than one percent

rests (40%) than among persons with an arrest record (25%, 29% and 16%). Such seizures were least common among persons who had been arrested more than once before (16%). Similarly, seizures of more than five kilograms occurred less frequently among persons with no prior arrests (26%) than among persons with an arrest record (62%, 42% and 58%). Although the numbers are quite small, such large seizures were most frequently made when the arrestee had one prior drug arrest (62%).⁷

⁷ Persons for whom information as to prior record was unavailable resemble those with no prior record insofar as amounts seized are concerned. Seizures from such persons were as likely to involve four ounces or less (40%) and only a little more likely to involve over five kilograms (36%). These data are consistent with two interpretations. First, lack of information may generally indicate no prior arrests, in which case three-fourths of the Customs arrestees had no prior record. Second, the lack of information may be a function of the fact that the

Table 28

Circumstances of Investigative Arrests - Customs

Total Investigative Arrests - 89

Source of Information

Leading to Investigation

Informant

"Reliable Source"- unspecified	28%
Professional informant	1
Arrestee informant	9
Independent informant	3

Interagency referral

Internal agency referral	17
Unknown	32

Object of Investigation

Marihuana	90
Hashish	11
Cocaine	5
Amphetamines	2
Methamphetamines	0
Barbiturates	0
LSD or other hallucinogens	0
Heroin	1
Opium	2
Other drugs	9

Use of Search Warrants

Not used	62
Used	26
Described "narcotic drugs" or similar general language	2
Described marihuana or hashish only	10
Described several drugs including marihuana or hashish	4
Description unknown	10
Unknown whether used	12

Use of Arrest Warrants

Not used	80
Unknown whether used	10
Used	11

Disposition of previous arrests was also associated with amount seized. Persons previously incarcerated were most likely to possess more than five kilograms (71%) and least likely to possess four ounces or less (17%).

seizure was small; that is, Customs was more likely to drop "small" cases or turn them over to the states, and therefore may not have been interested in documenting the arrestee's prior involvement with the criminal justice system. The data presented on disposition tend to support this second interpretation.

**Table 29 Physical Locations of Arrest and Demographic Characteristics
and Prior Investigation - Customs**

Total (491)

Physical Locations of Arrest

Private residence or other private building	12%
Travel Locations	
Airport or airplane	10
Railroad station or bus terminal	0
Dock or other shipping point	3
Border Station or Crossing	55
Other	
Indoor public area	*
Street, road, highway	12
Other outdoor public area	1
Unknown	7

Presence of Motor Vehicle

Arrestee in motor vehicle	64
Arrestee not in motor vehicle	28
Unknown	8

Location of Arrest

	Private Residence	Travel Location	Border Station	Other or Unknown
Total (491)	(58) 12%	(62) 13%	(269) 55%	(102) 20%

Age

Up to 20 (151)	11%	9%	58%	22%
21-25 (223)	14	11	52	23
26-35 (92)	11	21	54	14
Over 35 (24)	0	17	62	21
Unknown (1)	0	100	0	0

Ethnicity

White (348)	12	12	55	20
Minority (141)	12	13	53	21
Unknown (2)	0	0	50	50

Employment Status

Student or Military (151)	12	14	52	22
Employed (181)	9	16	60	15
Unemployed (136)	15	10	51	24
Unknown (23)	13	0	57	30

Scope of Investigation

Spontaneous or Non-				
Drug (402)	5	14	64	17
Drug Investigation (89)	40	8	13	38

Table 30 Drugs Seized and Amount of Marihuana or Hashish Seized - Customs

Total 491

Drugs Seized *

Marihuana or hashish only	86%
Marihuana or hashish and	
Heroin	3
Opium	*
Cocaine	2
Barbiturates	2
Amphetamines	5
Methamphetamines	*
LSD or other	
Hallucinogens	2
Other or unknown	3

Amount of Marihuana or Hashish Seized

	Marihuana	Hashish
Less than one ounce	28	6
Between one and 4 ounces	6	*
Between 4 and 16 ounces	7	*
Between 16 ounces and 5 kg.	17	3
Over 5 kg.	33	1
Unknown amount	2	1
None	6	89

*Percentages add to more than 100% because in any arrest more than one additional drug other than marihuana might be seized.

Table 31 also shows the relationship between other circumstances of arrest and amount seized. The data indicate that amount seized is strongly associated with scope of investigative activity. Seizures of four ounces or under were much more commonly made in spontaneous arrests (43%) than in investigative arrests (7%). Conversely, seizures of more than five kilograms occurred considerably more frequently among persons arrested after an investigation (55%) than among persons arrested spontaneously (31%).

Finally, amount seized is also linked with certain locations of arrest. Proportionately more border station and travel location arrests involved four ounces or less (49% and 50%) than did arrests made in private residences (7%). Conversely, proportionately more private residence arrests involved more than one pound (66%) than did arrests at travel locations (37%) and border stations (45%). Indeed almost half (45%) of the seizures in private residences involved over five kilograms.

Disposition

As with BNDD cases, information on disposition in Customs is divided into two phases. The

"initial disposition" refers to the post-arrest decision whether or not to prosecute the case under federal law. The "ultimate disposition" refers to the final disposition of cases prosecuted at the federal level.

INITIAL DISPOSITION

Of the sample of 491 persons arrested by the Bureau of Customs for marihuana-related offenses, 56% were prosecuted under federal law. Cases against the remaining 42% (2% unknown) of the arrestees were either dropped (14%) or referred to the states for prosecution (28%).

The data in Table 32 indicate that patterns of initial disposition are associated with certain demographic characteristics of the arrestees. The older the arrestee, the more likely he was to be prosecuted under federal law. About half (51%) of the arrestees under 21 were prosecuted by Customs, as compared to 54% of those 21-to-25, 63% of those 26-to-35 and 75% of those over 35. Similarly, cases against those under 21 were dropped more often (19%) than cases against arrestees in general (overall, 14%). Cases against arrestees over 35 were least often dropped (4%).

Cases against whites were as likely to be dropped as those against ethnic minorities (14% and 13%), but proportionately more minority group arrestees were prosecuted at the federal level (67% to 51%). With regard to sex, cases involving females were more likely than those involving males to be dropped (26% to 12%) and were also more commonly turned over to the states (33% to 27%).

The data also indicate that unemployed persons were more likely to be prosecuted (63%) than others (both 54%) and were less likely to have their cases dropped (8%) than employed persons (19%).

Table 32 also suggests that a prior record, especially a serious one, is strongly associated with the decision to prosecute. Almost a fourth (23%) of persons with no prior arrests had their cases dropped, and cases against another fourth (23%) were referred to the states. About half (51%) were prosecuted under federal law.⁸ Among those with prior arrests, however, 82% (81%, 71% and 84% respectively) were prosecuted by Customs, and 10% (19%, 4% and 12% respectively) were referred to the states; only 7% (0%, 17% and 4% respectively) of these cases were dropped.

⁸ The fact that information regarding prior police contact was unrecorded is as closely associated with a decision not to prosecute under federal law as the absence of prior arrests. Among those for whom no information is available, less than half (49%) were prosecuted by Customs (overall, 56%) and 39% were referred to the states (overall, 28%).

Table 31 Amount Possessed by Demographic Characteristics, Prior Police Contact and Circumstances of Arrest - Customs

	Up to 4 oz. of Marihuana or Hashish (180) 37%	Between 4 and 16 oz. of Marihuana or Hashish (38) 8%	Between 16 oz. and 5 Kg. of Marihuana (84) 17%	More than 16 oz. of Hashish or More than 5 Kg. of Marihuana (174) 35%	Amount Unknown (15) 3%
Age					
Up to 20 (151)	36%	8%	24%	28%	3%
21-25 (223)	39	9	17	32	2
26-35 (92)	36	4	7	48	5
Over 35 (24)	12	4	12	67	4
Unknown (1)	100	0	0	0	0
Ethnicity					
White (348)	41	8	16	31	3
Minority (141)	26	6	19	46	3
Unknown (2)	50	0	50	0	0
Employment Status					
Student or Military (151)	38	11	22	38	1
Employed (181)	43	8	13	32	4
Unemployed (136)	26	5	16	49	3
Unknown (23)	35	0	22	30	13
Prior Arrest Record					
No Previous Arrest (176)	40	10	22	26	3
One Drug Arrest Only (16)	25	6	6	62	0
One Non-Drug Arrest Only (24)	29	8	21	42	0
More than One Arrest (50)	16	2	18	58	6
Unknown (225)	40	8	14	36	3
Scope of Prior Contact					
No Prior Record (176)	40	10	21	26	3
Arrested; Not Convicted (30)	20	7	13	57	3
Convicted; Not Incarcerated (21)	24	5	28	43	0
Convicted and Incarcerated (24)	17	0	12	71	0
Unknown (240)	40	8	14	36	3
Scope of Investigation					
Spontaneous or Non- Drug (402)	43	6	17	31	2
Drug Investigation (89)	7	13	18	55	7
Physical Location					
Private Residence (58)	7	22	21	45	5
Travel Location (62)	50	11	19	18	2
Border Station (269)	49	4	11	34	2
Other; Unknown (102)	12	8	30	44	6

Table 32

Initial Disposition by Demographic Characteristics, Prior Police Contact and Circumstances of Arrest - Customs

	Case Dropped (68) 14%	Referred to State (118) 28%	Prosecuted at Federal Level (271) 56%	Other; Unknown (12) 2%
Total (491)				
Age				
Up to 20 (151)	19%	29%	51%	1%
21-25 (223)	10	31	54	4
26-35 (92)	15	21	63	1
Over 35 (24)	4	21	75	0
Unknown (1)	100	0	0	0
Ethnicity				
White (348)	14	32	51	3
Minority (141)	13	18	67	2
Unknown (2)	0	50	50	0
Sex				
Male (418)	12	27	58	3
Female (73)	26	13	41	0
Employment Status				
Student or Military (151)	12	26	54	7
Employed (181)	19	26	54	1
Unemployed (136)	8	29	63	0
Unknown (23)	17	48	35	0
Occupational Status				
Student or Military (152)	12	26	55	7
Blue Collar (167)	14	23	62	1
White Collar (81)	18	25	57	0
Artisan, etc. (12)	17	42	42	0
Other; Unknown (79)	11	43	46	0
Prior Arrest Record				
No Previous Arrest (176)	23	23	51	3
One Drug Arrest Only (16)	0	19	81	0
One Non-Drug Arrest Only (24)	17	4	71	8
More than One Arrest (50)	4	12	84	0
Unknown (225)	10	39	49	2
Scope of Prior Contact				
No Prior Record (176)	23	23	51	5
Arrested; Not Convicted (30)	10	23	63	3
Convicted; Not Incarcerated (21)	5	10	86	0
Convicted and Incarcerated (24)	0	4	96	0
Unknown (240)	10	36	51	3
Scope of Investigation				
Spontaneous or Non- Drug (402)	16	28	52	3
Drug Investigation (89)	2	28	70	0
Amount				
Up to 4 oz. of Marijuana or Hashish (180)	31	41	23	5
4-16 oz. of Marijuana or Hashish (38)	5	53	37	5
16 oz. - 5 Kg. of Marijuana (84)	5	29	65	1
More than 16 oz. of Hashish and/or over 5 Kg. of Marijuana (174)	2	9	89	0
Amount Unknown (15)	27	27	47	0

The initial dispositional decision is also related to the disposition of previous arrests. Ninety-six percent of those previously incarcerated were prosecuted under federal law, as compared to 86% of those previously convicted but not incarcerated and 63% of those previously arrested but not convicted.

The data in Table 32 also indicate that patterns of initial disposition are associated with circumstances of the arrest. Cases against persons arrested spontaneously were eight times more likely to be dropped as those against investigated arrestees (16% to 2%). Cases against each group were equally likely to be referred to the states for prosecution (both 28%).

The amount of marijuana or hashish seized is strongly associated with the initial dispositional decision. Cases involving four ounces or less were

the most likely to be dropped (31%); cases involving between four and 16 ounces were the most likely to be referred to states (53%); and cases involving more than 16 ounces were the most likely to be prosecuted by Customs (81%).*

There is very little variation in the association between amount and initial disposition. Cases involving more than five kilograms were dropped less often (2%) than cases involving between four ounces and five kilograms (5%) and considerably less often than those involving four ounces or less (31%). Conversely, nine out of 10 (89%) of the cases involving more than five kilograms were prosecuted by Customs, as compared to less than a fourth (23%) of those involving four ounces or less, somewhat more than one-third (37%) of those involving between four and 16 ounces and around two-thirds (65%) of those involving 16 ounces to five kilograms.

ULTIMATE DISPOSITION

Of the sample of 491 arrestees, 271 or 56% were prosecuted by Customs. In the effort to extract from the files the offense for which the arrestee was charged, the Commission's researchers found that the Customs records would usually state that the defendant was arrested and charged with violation of 21 U.S. § 176(a)—"smuggling." Occasionally, if an agent had a particular interest in the disposition of the case, a handwritten note would appear in the file indicating the disposition. However, most files contained only a printed form stating that the case had been disposed of by "conviction and sentence;" no specific information was provided.

Upon further examination at the respective U.S. Attorney's office; it was found that the complaint in such cases might actually state one or more of the several charges under § 176(a), i.e., "smuggling," "transportation," "concealment," etc. The defendant might then be indicted on several counts of § 176(a). Ultimately he might be allowed to plead guilty to violation of some other offense, for example, possession under the Marijuana Tax Act, and the other charges would be dropped. Thus, the true picture of the disposition of the case was entirely different from that presented by the Customs file.

Sometimes defendants were charged initially, or were allowed to plead subsequently, to general nondrug charges, such as "transporting merchandise" or "removal of property subject to seizure." Such offenses will be referred to as "nondrug Customs offenses" for purposes of subsequent anal-

*210 out of 258 cases.

ysis both in this section and in the INS section which follows.

Table 33 shows the ultimate disposition of various offenses with which the Customs defendants were charged. By far the most common charge was smuggling or its variants under § 176(a). Eighty-one percent of the arrestees were charged with at least one count of smuggling. (The table shows that 51 persons were charged with one non-smuggling offense only. The total number of smuggling cases—270—is misleading because two or more counts of smuggling were often charged.)

About half (51%) of the arrestees were charged with possession and lesser proportions were charged with conspiracy (19%), importation (14%) and nondrug Customs offenses (10%). One person was charged with sale (the arrestee from whom a "buy" was made) and another was charged with manufacture.

Of those charged with smuggling, 17% were

charged with this offense alone. Thirty-seven percent were charged with smuggling in addition to one other offense and 46% were charged with two additional offenses. Of those charged with possession, 15% were charged with this offense alone. Thirty-six percent were charged with one other offense, and 49% were charged with possession and two other offenses.

Conspiracy was most often charged as a third offense (73%), although 16% of those charged with this offense were not charged with any other offense. Nondrug Customs offenses were never charged alone. In 56% of the cases in which this offense was charged, it was a second offense; in 44% it was a third offense. Importation, on the other hand, was most often charged alone (54%). In about one-fourth of the cases (24%), it was charged with one other offense; and in 22% it was charged with two additional offenses.

Table 33 - Ultimate Disposition of Specific Marihuana Charges - Customs

Total Federal Prosecutions Involving Marihuana Charges (271)	Incarcerated For at least One offense (63) 23%	Convicted of at least One Offense; Not Incarcerated (107) 40%	Not Convicted of any offense (71) 26%	Pending; Unknown (30) 11%
	Incarcerated for this offense	Convicted, but Not Incarcerated for this offense	Not Convicted of this offense	Pending or Unknown
<u>Offense</u>				
<u>Delivery (1)</u>				
Only Charge Case (1)	0%	100%	0%	0%
2 Charge Cases (0)	0	0	0	0
3 + Charge Cases (0)	0	0	0	0
<u>Possession (138)</u>				
Only Charge (21)	19	67	10	5
2 Charge Cases (49)	27	57	8	8
3 + Charge Cases (68)	25	37	37	1
<u>Smuggling (270)</u>				
Only Charge (47)	15	9	57	19
2 Charge Cases (100)	12	9	75	4
3 + Charge Cases (123)	11	6	74	10
<u>Importation (37)</u>				
Only Charge (20)	35	30	15	20
2 Charge Cases (9)	0	44	33	22
3 + Charge Cases (8)	13	25	63	0
<u>Conspiracy (51)</u>				
Only Charge (8)	75	0	25	0
2 Charge Cases (6)	17	33	50	0
3 + Charge Cases (37)	5	0	78	16
<u>Manufacturing (1)</u>				
Only Charge (1)	0	0	0	100
2 Charge Cases (0)	0	0	0	0
3 + Charge Cases (0)	0	0	0	0
<u>Nondrug Customs Offenses (27)</u>				
Only Charge (0)	0	0	0	0
2 Charge Cases (15)	13	73	13	0
3 + Charge Cases (12)	50	17	25	8

Table 33 indicates that the conviction rates were highest for possession and nondrug offenses, and were lowest for smuggling and conspiracy.

Overall, 63% of the arrestees were convicted of some offense. But of those charged with smuggling (81% of all arrestees), data not presented show that only 19% were convicted of that offense. And proportionately fewer persons were convicted of this offense when it was a second or third offense (74% and 75% not convicted) as when it was the only offense charged (57% not convicted). The pattern is the same for conspiracy. Twenty-two percent of the persons charged with conspiracy convicted of this offense. In cases where there were also two other charges, only 5% were convicted for conspiracy.

The pattern is precisely the reverse for possession and nondrug Customs offenses. Of those charged with possession (51% of all arrestees), 72% were convicted of this offense. Unlike the pattern for smuggling and conspiracy, the rate of conviction did not change significantly when there was more than one charge. In cases where possession was the only offense, 86% were convicted; when it was one of two offenses 84% were convicted; and when it was one of three offenses, 62% were convicted. Similarly, of those charged with nondrug Customs offenses (which were never charged alone), 78% were convicted of one such offense.

The data in Table 33 thus illustrate the plea-bargaining pattern among those arrested and prosecuted by the Bureau of Customs. Almost all arrestees are charged with smuggling, importation or conspiracy. However, in return for dismissal of these charges, defendants generally plead guilty to possession or a nondrug Customs offense.

Table 34 shows that 63% of the arrestees prosecuted by Customs were ultimately convicted of *some* offense, usually possession or a nondrug Customs offense. Of the 170 persons convicted, 37% were incarcerated (23% of those prosecuted). Twenty-six percent of those prosecuted by Customs were not convicted of any offense, and 11% of the cases were still pending or the disposition was unknown. Of the 491 persons originally arrested, 170 or 35% were ultimately convicted of a federal offense, and 63 or 13% were ultimately incarcerated.

The data indicate that certain demographic variables are associated with ultimate disposition. Persons under 21 were less likely to be incarcerated (18%) than persons 21-to-25 (23%) or 26-to-35 (31%). Convictions were more common among whites (68%) than among minority groups (54%); but minority group defendants were somewhat more likely to be incarcerated (28% to

21%). Convictions were more common among males (63%) than among females (53%), as were sentences to the penitentiary (24% to 13%).

With regard to employment status, employed persons were somewhat less likely to be convicted (51%) than either students or military personnel (72%) or unemployed persons (70%). (The higher proportion of unknown/pending for employees should be noted, however.) The data also suggest that, with regard to occupational status, blue collar workers more frequently escaped conviction (32%) than did white collar workers (26%) or students and military personnel (20%).

Table 34 also indicates that defendants with no prior record were considerably less likely to be incarcerated (14%) than persons with more than one arrest (51%). (The numbers are too small to permit analysis regarding scope of prior contact.)

With regard to circumstances of arrest, convictions were slightly more common among persons arrested spontaneously (64%) than among persons arrested after a drug investigation (58%). And incarceration was less commonly assessed in cases involving four ounces or less (8%) than in cases involving between four ounces and five kilograms (13%) or in cases involving over five kilograms (31%). Otherwise, the rate of conviction or dismissal does not appear systematically related to amount seized.

INS

The Immigration and Naturalization Service. ("INS") is a division of the Justice Department. Although the agency's primary function is the control of immigration, it becomes involved in the control of illegal drug traffic during the conduct of searches for illegal aliens at points of entry into the United States or at traffic points within 60 miles of the border. Because the Border Patrol Agents of INS frequently encounter smugglers during their border surveillance, and because INS agents are often the only federal law enforcement officials covering a particular border or traffic point, they often perform as Customs agents.

When INS agents arrest smugglers, they seize any contraband found, impound the vehicles used to convey it and turn the case over to the Bureau of Customs for prosecution. If an arrestee is determined not to be a smuggler, then INS remits the case to BNDD for prosecution.

In the course of routine searches for illegal aliens at border checkpoints, INS officers have authority to search, without a warrant, any spaces large enough to conceal a man. When circumstances lead INS agents to suspect smuggling, or when they are acting as Customs deputies, their

Table 34

Ultimate Case Disposition by Demographic Characteristics,
Prior Record and Characteristics of Arrest - Customs

	Incarcerated	Convicted Not Incarcerated	Not Convicted	Pending; Unknown
Total (271)	(63) 23%	(107) 40%	(71) 26%	(30) 11%
Age				
Up to 20 (77)	18%	40%	34%	8%
21-25 (119)	23	46	21	10
26-35 (58)	31	31	24	14
Over 35 (17)	24	18	35	24
Unknown (0)	0	0	0	0
Ethnicity				
White (175)	21	47	22	10
Minority (95)	28	26	33	13
Unknown (1)	0	0	100	0
Sex				
Male (241)	24	39	25	12
Female (30)	13	40	33	13
Employment Status				
Student or Military (81)	21	51	20	9
Employed (97)	21	30	31	19
Unemployed (86)	28	42	24	6
Unknown (7)	29	14	57	0
Occupational Status				
Student or Military (82)	22	50	20	9
Blue Collar (103)	22	36	32	10
White Collar (46)	24	28	26	22
Artisan, etc. (4)	0	75	25	0
Other; Unknown (36)	31	36	25	8
Prior Arrest Record				
No Previous Arrest (90)	14	51	23	11
One Drug Arrest Only (13)	0	46	38	15
One Non-Drug Arrest Only (17)	6	59	24	12
More than One Arrest (41)	51	20	24	5
Unknown (110)	25	34	28	13
Scope of Prior Contact				
No Prior Record (90)	14	51	23	11
Arrested; Not Convicted (19)	5	42	26	26
Convicted; Not Incarcerated (18)	44	44	11	0
Convicted and Incarcerated (22)	41	27	27	5
Unknown (122)	26	32	30	11
Scope of Investigation				
Spontaneous or Non-Drug (209)	22	42	25	11
Drug Investigation (62)	27	31	31	11
Amount				
Up to 4 oz. of Marihuana -or Hashish (40)	8	48	28	18
4-16 oz. of Marih. or Hash. (14)	14	79	7	0
16 oz. - 5 Kg. of Marihuana (55)	13	51	27	9
More than 16 oz. of Hashish and/or Over 5 Kg. of Marihuana (155)	31	32	26	12
Unknown (7)	43	0	57	0

authority to search is broader, becoming coextensive with that of Customs agents.

In addition to acting as border control deputies, certain agents of INS are authorized to search for and locate illegal aliens in connection with proposed deportation proceedings. Sometimes in the course of these duties they uncover illegal drugs or drug paraphernalia. It is not clear whether the contraband seized in such cases may be used as evidence against the alien in a prosecution under the drug laws if the agent's warrant did not specify drugs.⁹

Enforcement Trends

Table 35 shows the amount of marihuana seizures made by INS during fiscal years 1970 to 1972.

If the present trend continues, seizures during Fiscal Year 1972 will have doubled those made in Fiscal Year 1970. In calendar year 1970, 52,945.6 pounds of marihuana were seized. The remainder of this section presents findings relating to the 477 arrests made in connection with these seizures.

The Arrestees

Demographic Characteristics. The typical INS arrestee is a white unemployed male, between 21 and 25 years of age, who is a U.S. citizen.

The data in Table 36 indicate that INS arrestees are somewhat more likely than BNDD or Customs arrestees to be male (93% to 85% and 86%) and

considerably more likely to be Spanish-speaking (33% to 16% and 12%) and unemployed (44% to 29% and 28%).

The age of INS arrestees is little different from BNDD or Customs arrestees, with three-fourths being 25 or under and 93% being under 36. Nonetheless, 45% of the INS arrestees (more than half of those cases in which information was available) were integrated into the larger society: 16% were students, 3% were in the military and 26% were employed.

Prior Police Contact. Data regarding the prior police contact of INS arrestees appear in Table 37. No information was available in 23% of the cases. In almost half of the cases where information was recorded, the arrestee had no prior arrests. The data suggest, however, that those *with* prior records have been deeply involved in the criminal justice system. About two-thirds of those with prior arrest records had been arrested more than once; subsequent disposition of these arrests was not recorded about half of the time. When such information was available, it indicated that proportionately more INS arrestees had had serious criminal records than was the case with individuals arrested by Customs and BNDD. Twenty-one percent of the INS arrestees had been previously convicted and 15% had been previously incarcerated.

The data in Table 37 also show that prior involvement with the law is associated with certain demographic characteristics of the INS arrestees. The older arrestees (over 25) had been arrested, convicted and incarcerated more often than the younger ones (25 or under). Prior arrest record did not vary by ethnicity, but minority group arrestees were somewhat more likely to have been incarcerated than white arrestees. Finally, students or military personnel, who constituted 19% (91 out of 477 cases) of the arrest population, were more likely than any other group to have had a solitary drug arrest. But fewer of them had been arrested (35%), convicted (12%), and incarcerated (8%) than was the case with other arrestees, particularly the unemployed (45% arrested, 27% convicted and 20% incarcerated).

Circumstances of Detection and Arrest

Scope of Investigation. Not surprisingly, INS arrests were never preceded by intensive investigation. Table 38 shows that they were generally (75%) spontaneous, arising from customary border surveillance. Otherwise (23%) they were preceded by short-term drug investigations, generally precipitated by interagency referral. Data not shown indicate that in 2% of the cases, they arose from investigations unrelated to drugs.

TABLE 35
MARIHUANA SEIZURES MADE BY THE
U. S. IMMIGRATION AND NATURALIZATION SERVICE

	Fiscal Year 1970	Fiscal Year 1971	Fiscal Year 1972
July	170.4	5,155.9	3,316.0
August	419.0	4,281.0	5,579.0
September	4,675.8	5,274.8	5,588.0
October	2,169.7	2,105.4	6,557.0
November	1,304.3	4,198.0	6,707.0
December	561.3	5,397.8	3,592.0 (incomplete)
January	3,323.8	8,256.4	
February	2,017.6	4,381.1	
March	3,011.8	3,628.7	
April	5,682.5	1,278.5	
May	6,686.2	2,101.7	
June	5,810.8	3,975.1	
TOTAL	35,833.2 lbs.	50,034.4 lbs.	31,339.7 lbs.

⁹ An analogous situation has been considered by the Supreme Court. In *Abel v. United States*, 362 U.S. 217 (1960), rehearing denied 362 U.S. 984 (1960), the court admitted evidence of espionage seized by INS officers without a warrant pursuant to an administrative arrest, even though the FBI, which prosecuted the case, had no authority to arrest in these circumstances and therefore had no authority to search.

Table 36

Demographic Characteristics of INS Arrestees
Compared with Customs and BNDD Arrestees

Number of People	INS 477	Customs 491	BNDD 420
<u>Nationality</u>			
U.S. Citizen	80%	85%	83%
Alien	20	14	3
Unknown	*	*	14
<u>Age</u>			
Under 18	6	4	1
18 - 20	24	27	24
21 - 25	45	45	46
26 - 35	18	19	20
36 - 45	4	4	6
Over 45	1	*	1
Unknown	2	*	2
<u>Sex</u>			
Male	93	85	86
Female	7	15	14
Unknown	0	0	*
<u>Ethnicity</u>			
White	57	71	77
Black	4	12	6
Spanish speaking	33	16	12
Other	*	*	2
Unknown	6	*	3
<u>Marital Status</u>			
Single	56	65	38
Married	27	24	15
Separated	2	2	3
Divorced	4	4	2
Widowed	0	1	0
Unknown	11	4	41
<u>Employment Status</u>			
Student	16	21	15
Military	3	10	2
Employed	26	37	25
Unemployed	44	28	29
Retired	*	0	0
Unknown	11	4	28
<u>Occupation at Time of Offense</u>			
Student	16	21	16
Military	3	10	1
Skilled labor	10	5	4
Semi-skilled labor	11	10	4
Unskilled labor	18	13	8
Personal service	4	5	5
Sales or clerical	6	6	7
Artisan, craftsman, musician	4	2	6
Trained, technical	4	3	3
Managerial, proprietary	*	4	4
Professional	1	2	1
Other	2	4	2
Unknown	19	10	35
None	*	1	3

*Indicates less than one percent

Table 37 Prior Drug and Nondrug Arrests and Extent of Prior Contact With Criminal System
by Demographic Characteristics - INS

	Prior Arrest Record				Nature of Prior Record				
	(173)	(25)	(42)	(127)	(110)	(173)	(63)	(28)	(71)
	36%	5%	9%	27%	23%	36%	13%	6%	15%
	None	One Drug Only	One Non-drug Only	More than One	Unknown	None	Arrested-Not Convicted	Convicted-Not Incarcerated	Convicted and Incarcerated
									Unknown
Total 477	(173) 36%	(25) 5%	(42) 9%	(127) 27%	(110) 23%	(173) 36%	(63) 13%	(28) 6%	(71) 15%
Age									
Up to 20 (143)	38%	6%	8%	13%	33%	38%	13%	4%	6%
21-25 (216)	41	5	7	27	20	41	13	6	14
26-35 (86)	20	7	12	48	14	20	16	10	29
Over 35 (22)	36	0	14	27	23	36	9	5	23
Unknown (10)	40	0	10	20	30	40	0	0	20
Ethnicity									
White (271)	39	7	9	30	15	39	17	6	15
Minority (175)	37	3	10	25	24	37	10	6	17
Unknown (31)	6	0	0	10	84	6	0	0	6
Employment									
Student or Military (91)	42	7	10	18	24	42	14	4	8
Employed (123)	39	6	11	31	13	39	15	7	15
Unemployed (210)	37	5	9	31	18	37	14	7	20
Unknown (53)	17	2	2	13	66	17	4	2	9
									68
									23
									24
									32
									87
									30
									23
									26
									38%

Table 38 Scope of Investigation by Demographic Characteristics and Prior Arrest Record - INS

	Spontaneous or Nondrug Investigation (367) 77%	Drug Investigation (110) 23%
Total (477)		
Age		
Under 21 (143)	77%	23%
21 - 25 (216)	77	23
26 - 35 (86)	78	22
Over 35 (22)	77	23
Unknown (10)	60	40
Ethnicity		
White (271)	73	27
Minority (175)	83	17
Unknown (31)	77	23
Employment Status		
Student or Military (91)	70	30
Employed (123)	82	18
Unemployed (210)	78	22
Unknown (53)	74	26
Prior Arrest Record		
No previous arrest (173)	37	35
One drug arrest only (63)	13	15
One nondrug arrest only (28)	5	9
More than one arrest (71)	16	10
Unknown (142)	29	32

The data in Table 38 also show that the likelihood of a prior drug investigation did not vary with age, although it did vary somewhat according to ethnicity and employment status. INS arrests of whites followed drug investigations (27%) more often than did arrests of persons from ethnic minorities (17%). Similarly, arrests of students or military personnel were more likely to result from a drug investigation (30%) than were arrests of employed (18%) or unemployed persons (22%).

Circumstances of Spontaneous Arrests. Panel one of Table 39 indicates that the two reasons most commonly recorded for spontaneous arrests were "routine search or random check" (54%) and "suspicious behavior" (47%). Other frequent reasons were that the officer smelled marijuana (17%) or saw a suspicious container (16%).

"Suspicious behavior" and "random check" were each the *only* reason recorded in one-fifth of the cases. Conduct of a search on grounds of suspicious behavior may be no different from the routine Border Patrol operations. Generally, absent some suspicious circumstance, routine searches are perfunctory. The second panel of Table 39 does indicate, however, that "suspicious behavior" was more commonly the *only* reason given for arrestees under 21 (26%) than for those 21-to-25 (19%) or 26-to-35 (15%).

Circumstances of Investigative Arrests. In the 110 INS arrests which were preceded by a short-term drug investigation, the object was almost always marijuana, the source of information precipitating the investigation was usually either interagency referral from Customs (54%) or internal agency referral (31%), and search and arrest warrants were never used.

The data in Table 40 indicate that the customary pattern of an INS investigation was a tip that certain individuals or vehicles were suspected or known to be smuggling marijuana. Although 2% of the INS arrests were accomplished in private residences (see Table 41), the files do not record the use of warrants in these or any other cases.

Physical Location of Arrest. The top panel of Table 41 shows that approximately 43% of the INS arrests were made at border stations where INS patrol agents are clothed with a power to search coextensive with that of Customs agents. Another 45% of arrests were made on major highway routes leading off the border, as at the Ocean-side stop outside of San Diego. At such traffic stops a less refined type of search than a Customs search is generally conducted. Ordinarily, the scope of search in these cases is limited to examination of passenger spaces in the vehicle and to the trunk. In at least 87% of INS arrests, the arrestee was in a vehicle.

The second panel of Table 41 shows that physical location of arrest varies only slightly according to demographic characteristics of the arrestee. Persons under 21 were somewhat less likely to be arrested at the border (41%) than persons 21-to-25 (44%) or 26-to-35 (49%). Neither age nor employment status appear related to place of location. (Although only nine persons in the INS arrest population were arrested in private residences, eight of them were from ethnic minorities.)

With regard to prior investigation, the data indicate that over three-fourths of the investigative arrests occurred away from the border station areas, as compared to half of the spontaneous arrests.

Amount of Marijuana Seized. The data in Table 42 show that over five kilograms of marijuana were seized in 85% of the cases. (By comparison, such seizures occurred in 36% of the BNDD cases and 33% of the Customs cases.) The high incidence of large seizures is not surprising since the spaces usually searched by INS agents are quite large (e.g., a car trunk). Data, not shown, indicate that marijuana was the only drug seized in 92% of the cases. Narcotics (3%), amphetamines or barbiturates (4%), hallucinogens (1%) and hashish (2%) were also seized in the other cases. For purposes of further analysis, the 10 hashish cases are included with marijuana.

Table 42 also shows that the existence of a prior investigation was unrelated to the amount of marijuana seized. With regard to demographic characteristics of arrestees, those under 21 were much less likely to possess more than five kilograms (79%) than those 26-to-35 (96%). With

Table 39 Causes of Spontaneous Arrests - INS

Total Spontaneous Arrests (367)

Reasons Specified for Spontaneous Marihuana Arrests*

Routine Search or Random Check	54%
Suspicious Behavior	47
Officer Smelled Marihuana	17
Officer Saw Marihuana	11
Dog Smelled Marihuana	2
Arrestee Made "Furtive Gesture"	10
Officer Saw Suspicious Container	16
Officer Saw Drug Paraphernalia	1
Subject Was Searched Incident to Another Arrest	2
Other	3

*More than one reason was often specified

Causes of Spontaneous Arrests by Demographic Characteristics

Total (367)	(74) 20%	(77) 21%	(216) 59%
	Routine Search Random Check Only	Suspicious Behavior Only	Two or More More Reasons
<u>Age</u>			
Under 21 (110)	7%	26%	66%
21-25 (167)	23	19	57
26-35 (67)	27	15	58
Over 35 (17)	47	24	29
Unknown (6)	17	33	50
<u>Ethnicity</u>			
White (198)	16	21	63
Minority (169)	25	21	54
<u>Employment Status</u>			
Student or Military (64)	23	23	53
Employed (101)	27	15	58
Unemployed (163)	17	20	63
Unknown (39)	10	36	54

Table 40 Circumstances of Investigative Arrests - INS

Total (110)

Object of Investigation

Marihuana	96%
Hashish	1
Amphetamines	3

Source of Information Leading to Investigation

Interagency Referral	54
Internal agency referral	31
"Reliable source;" "Confidential informant" - specifics unknown	9
Professional informant	0
Arrestee informant	1
Independent informant	5
Other	1

Use of Warrants

Search Warrant	
Used	0
Not Used	98
Unknown	2
Arrest Warrant	
Used	0
Not Used	98
Unknown	2

regard to ethnicity, minority group arrestees were less likely to possess more than five kilograms (79%) than white arrestees (89%). Employment status was not associated with amount seized. Nor was prior contact systematically associated with amount seized, although persons with one prior drug arrest were more likely to have between one pound and five kilograms (16%) than any other group (5% and 6%). Similarly, persons previously arrested but not convicted were more likely to possess this amount (11%) than persons not previously arrested (6%) or those previously convicted (7% and 3%).¹⁰

Disposition

As mentioned earlier, the dispositional process after arrest was separated into two phases for purposes of analyzing federal cases. The decision whether or not to refer a case to a state for prosecution is an identifiable disposition reflecting the importance attached to the case by federal authorities. Accordingly, the dispositional process was divided into "initial disposition" (case dropped, referred to state or prosecuted at the federal level) and "ultimate disposition."

As explained in connection with the analysis of BNDD and Customs arrests, ultimate disposition refers to whether the arrestee himself was ultimately "not convicted," "convicted and not in-

carcerated" or "incarcerated" without regard to analysis of the disposition of specific charges.

INITIAL DISPOSITION

The data in Table 43 indicate that 88% of the INS arrestees were prosecuted at the federal level (compared to 46% of the BNDD arrestees and 56% of the Customs arrestees). Charges against the arrestees were dropped immediately after arrest in 3% of the cases (compared to 11% of the BNDD cases and 14% of the Customs cases), and the arrestees were referred to states for prosecution in an additional 9% of the cases (compared to 43% of the BNDD cases and 28% of the Customs cases).

Table 43 also indicates that initial disposition did vary somewhat according to demographic characteristics. Proportionately more of the arrestees 35 and older (18%) had their cases dropped than arrestees generally (overall, 3%). But cases involving persons under 21 were more often referred to the states for prosecution (17%) than those involving persons over 35 (9%), 21-to-25 (6%) and 26-to-35 (1%). Conversely, persons 26-to-35 were most likely to be prosecuted at the federal level (99%) and persons over 35 were least likely to be so prosecuted (73%). Four out of five arrestees under 21 are prosecuted by federal authorities, as are almost nine-tenths of those 21-to-25.

Neither ethnicity, sex, employment status, occupational status nor prior record appear to be related to initial disposition.¹¹

Table 44 indicates that initial disposition is only slightly related to the occurrence of prior investigation; 93% of the individuals arrested after a drug investigation were prosecuted federally as compared to 86% of those arrested spontaneously. The data indicate that initial disposition does vary according to the amount of marihuana seized. Two-thirds of the cases involving less than one pound were either dropped (20%) or referred to the states (46%). By comparison, one out of five of the cases involving more than one pound but less than five kilograms were either dropped (5%) or referred to the states (16%). Finally, 93% of the cases involving over five kilograms were pros-

¹¹ It was suggested earlier that demographic and prior record information was unrecorded in most cases involving seizure of small amounts of marihuana. The same is true in regard to initial disposition. Forty-nine percent of those for whom employment status was unknown were not prosecuted by the federal authorities (overall, 12%). Similarly prosecution at the federal level was declined with regard to 32% of those for whom prior record information was unrecorded. This suggests that a decision not to prosecute precedes the gathering of information regarding prior record.

¹⁰ Interestingly, data regarding employment status and prior record were unrecorded for almost all (87%) of those from whom less than four ounces were seized.

Table 41 Physical Location of Arrest - INS

Total (477)

<u>Physical Location</u>		<u>Use of Motor Vehicle</u>	
Private residence	2%	Yes	87%
Travel station	1	No	10
(plane, train, ship, bus)		Unknown	3
Border station	43		
Highway	45		
Other public place	8		
Unknown	1		

Physical Location by Demographic Characteristics
and Scope of Investigation

<u>Characteristics of Arrestee</u>	<u>Private Residence</u>	<u>Travel Station</u>	<u>Border Station</u>	<u>Highway or Other Public Place</u>
Total (477)	(9) 2%	(4) 1%	(207) 43%	(256) 53%
<u>Age</u>				
Under 21 (143)	1%	1%	41%	57%
21-25 (216)	2	0	44	54
26-35 (86)	1	2	49	48
Over 35 (22)	5	0	45	50
Unknown (10)	10	0	30	60
<u>Ethnicity</u>				
White (271)	0	1	43	56
Minority (206)	4	0	44	51
<u>Employment Status</u>				
Student or military (91)	0	1	46	53
Employed (123)	2	1	46	51
Unemployed (210)	3	0	39	58
Unknown (53)	2	2	49	47
<u>Scope of Investigation</u>				
Spontaneous (367)	1	*	50	49
Prior drug investigation (110)	4	3	23	71

* Indicates less than one percent

Table 42
Amount Possessed by Scope of Investigation, Demographic
Characteristics and Prior Contact - INS

	Up to 4 oz. of Marih. or Hashish	Between 4 and 16 oz. of Marih.	Between 16 oz. and 5 Kg. of Marihuana	More than 5 Kg. of Marihuana	Amount Unknown
Total (477)	(14) 3%	(10) 2%	(43) 9%	(403) 85%	(7) 2%
<u>Scope of Investigation</u>					
Spontaneous or Non- Drug (367)	3%	2%	9%	84%	2%
Drug Investigation (110)	1	3	8	87	1
<u>Age</u>					
Under 21 (143)	5	1	13	79	*
21-25 (216)	2	3	9	83	*
26-35 (86)	2	1	2	96	0
Over 35 (22)	0	4	4	91	0
<u>Ethnicity</u>					
White (271)	1	2	7	89	1
Minority (206)	5	2	12	79	*
<u>Employment Status</u>					
Student or Military (91)	0	1	15	84	0
Employed (123)	2	3	9	86	0
Unemployed (210)	0	1	5	92	*
Unknown (53)	23	4	14	51	8
<u>Prior Arrest Record</u>					
No previous arrest (173)	0	2	6	89	*
One drug arrest only (25)	0	0	16	84	0
One non-drug arrest only (42)	0	0	5	92	2
More than one arrest (127)	2	0	6	92	0
Unknown (110)	11	5	15	65	3
<u>Scope of Prior Contact</u>					
No prior record (173)	0	2	6	89	1
Arrested - Not Convicted (63)	0	0	11	89	0
Convicted - Not Incarcerated (28)	0	0	7	89	4
Convicted and Incarcerated (71)	1	1	3	94	0
Unknown (142)	9	7	13	71	2

Table 43 Initial Disposition by Demographic Characteristics
and Prior Police Contact - INS

		Case Dropped	Referred to State	Prosecuted at Federal Level
Total - 477		(16) 3%	(42) 9%	(419) 88%
<u>Age</u>				
Under 21	(143)	1%	17%	81%
21-25	(216)	4	6	89
26-35	(86)	0	1	99
Over 35	(22)	18	9	73
Unknown	(10)	0	0	100
<u>Ethnicity</u>				
White	(271)	2	8	90
Minority	(206)	5	10	85
<u>Sex</u>				
Male	(443)	4	9	88
Female	(34)	0	9	91
<u>Employment Status</u>				
Student or Military	(91)	1	7	92
Employed	(123)	2	5	93
Unemployed	(210)	2	6	92
Unknown	(53)	15	34	51
<u>Occupational Status</u>				
Student	(92)	1	7	92
Blue Collar	(205)	2	6	92
White Collar	(56)	5	2	93
Artisan, etc.	(20)	10	0	90
Other, Unknown	(104)	6	21	73
<u>Prior Arrest Record</u>				
No Previous Arrest	(173)	2	6	91
One Drug Arrest Only	(25)	4	0	96
One Non-drug Arrest only	(42)	2	5	93
More than one arrest	(127)	1	1	98
Unknown	(110)	7	25	67
<u>Scope of Prior Contact</u>				
No Prior Record	(173)	2	6	91
Arrested; Not Convicted	(63)	5	2	94
Convicted; not incarcerated	(28)	4	0	96
Convicted and incarcerated	(71)	1	3	96
Unknown	(142)	5	20	75

Table 44 Initial Disposition by Circumstances of Arrest and Amount Seized - INS

	Case Dropped	Referred to State	Prosecuted at Federal Level
Total (477)	(16) 3%	(42) 9%	(419) 88%
<u>Scope of Investigation</u>			
Spontaneous or Nondrug (367)	4%	10%	86%
Drug Investigation (110)	3	5	93
<u>Amount Seized</u>			
Up to 4 oz. marihuana or hashish (14)	7	50	43
4-16 oz. marihuana (10)	40	40	20
16 oz.-5kg. marihuana (43)	5	16	79
More than 5 kg. marihuana (403)	1	6	93
Amount Unknown (7)	43	0	57

ecuted at the federal level, with only 1% being dropped.

ULTIMATE DISPOSITION

Table 45 shows the charges pressed in the 417 cases prosecuted at the federal level. Smuggling was by far the most common charge (81% of the arrestees were charged with this offense). Fifty-one percent were charged with smuggling alone, and an additional 30% were charged with smuggling in addition to some other offense.

After smuggling, the most common offenses charged were nondrug customs-related offenses, such as "transporting merchandise" or "removal of property subject to seizure." One-third of the arrestees (33%) were charged with such offenses; in 9% of the cases, one of these offenses was the only charge and in 24%, it was one of several charges.

Charges less commonly pressed were possession (19% of the cases), importation (5%), conspiracy (5%) and delivery (2%). Four percent of all arrestees were charged with possession alone, and 2% were charged with importation alone.

Put another way, two-thirds of the arrestees (67%) were charged with only one offense, generally smuggling; the remainder were charged with two or more offenses, the most common combination being smuggling and a nondrug offense.

Table 45 shows that overall, two-thirds of the INS defendants were convicted of at least one offense. Eighteen percent of the arrestees were not convicted of any offense and 15% of the cases were still pending or disposition was unrecorded. Of those convicted, 57%, representing 38% of all arrestees, were incarcerated.

In cases where the arrestee was charged only with smuggling, 58% were convicted (34% were incarcerated) and 26% were not convicted. By comparison, the arrestee was convicted of smuggling in only 14% of the cases when it was one of two charges and in 11% of the cases when it was one of three charges. The pattern was the same for delivery and conspiracy charges.

The pattern is the reverse with regard to the nondrug Customs offenses and possession. When a nondrug offense was the only charge, convictions were secured in 44% of the cases. On the other hand, when a nondrug offense was one of two charges, convictions resulted in 77% of the cases.¹² Similarly, the conviction rate for possession was quite high in all cases, 94% when it was the only charge, 95% when it was one of two charges, and 66% when it was one of three charges.

The data in Table 45 thus indicate that in the process of plea-bargaining in multi-charge cases, smuggling, delivery and conspiracy charges are dismissed in return for pleas of possession or nondrug offenses.

Table 46 shows the relationship between ultimate case disposition and the demographic characteristics, prior police contact of the arrestees and circumstances of arrest. The data suggest that certain demographic variables are associated with ultimate disposition. While age does not appear to be systematically associated with conviction, persons under 21 were considerably less likely to be incarcerated (28%) than those 21-to-25 (40%) or 26-to-35 (48%).

¹² In three charge cases, the incidence of convictions was quite low (14%), a puzzling figure.

Table 45 Ultimate Disposition of Specific Marihuana Charges - INS

Total Federal Prosecutions Involving Marihuana Charges-(417)	Incarcerated For at least One offense (158) 38%	Convicted of at least One Offense; Not Incarcerated (121) 29%	Not Convicted of any offense (77) 18%	Pending; Unknown (61) 15%
	Incarcerated for this offense	Convicted, but Not Incarcerated for this offense	Not Convicted of this offense	Pending or Unknown
<u>Offense</u>				
<u>Delivery (7)</u>				
Only Charge Case (0)	0%	0%	0%	0%
2 Charge Cases (0)	0	0	0	0
3 + Charge Cases (7)	0	0	100	0
<u>Possession (79)</u>				
Only Charge (18)	33	61	6	0
2 Charge Cases (20)	55	40	5	0
3 + Charge Cases (41)	44	22	27	7
<u>Smuggling (337)</u>				
Only Charge (212)	34	24	26	16
2 Charge Cases (71)	8	6	86	0
3 + Charge Cases (54)	11	0	78	11
<u>Importation (19)</u>				
Only Charge (10)	50	30	10	10
2 Charge Cases (2)	50	0	0	50
3 + Charge Cases (7)	43	0	43	14
<u>Conspiracy (20)</u>				
Only Charge (1)	100	0	0	0
2 Charge Cases (3)	0	33	0	67
3 + Charge Cases (16)	0	0	63	38
<u>Non-drug Customs Offenses (138)</u>				
Only Charge (39)	18	26	26	31
2 Charge Cases (64)	36	41	14	9
3 Charge Cases (35)	11	3	66	20

Whites were a little more likely to be convicted (68%) than members of minority groups (65%) but were less likely to be incarcerated (34% to 43%). With regard to sex, males were somewhat more likely to be convicted than females (68% to 53%) and three times more likely to be incarcerated (40% to 13%).

In regard to employment status, a pattern also emerges. Students or military personnel were about as likely to be convicted (63%) as unemployed defendants (66%) or employed defendants (68%). But, persons in school or in the service were less likely to be incarcerated (27%) than either unemployed (38%) or employed persons (44%).

Nature of prior record is strongly associated with ultimate case disposition. Persons with a previous drug arrest were more likely to be convicted (83%) than persons with a previous nondrug arrest (74%) or persons with multiple arrests or no arrests (both 67%). Such persons were also more likely to be incarcerated (71%) than persons with a nondrug arrest (54%), more than one arrest (42%) or no previous arrests (32%). The possibility of incarceration was strongly linked with

the scope of prior contact. Incarceration was more likely among persons previously incarcerated (63%) than persons previously convicted but not incarcerated (48%), and persons previously arrested but not convicted (39%). Incarceration was least likely among persons not previously arrested (32%).

The data also indicate that persons arrested spontaneously were about as likely to be convicted as persons arrested after an investigation. However, they were a little more likely to be incarcerated (40% to 31%). Persons possessing less than five kilograms were less likely to be convicted (53%) and incarcerated (23%) than persons possessing more than that amount (69% convicted and 40% incarcerated). It should be recalled, however, that more than five kilograms had been seized from 90% of the INS arrestees prosecuted by federal authorities.

SUMMARY

The data in the preceding pages describe the marihuana enforcement effort at the federal level.

Table 46 Ultimate Case Disposition by Demographic Characteristics, Prior Police Contact and Circumstances of Arrest - INS

Total (417)	Incarcerated 158 (38%)	Convicted Not Incarcerated 121 (29%)	Not Convicted 77 (18%)	Pending or Unknown 61 (15%)
<u>Age</u>				
Up to 20 (116)	28%	36%	24%	11%
21-25 (192)	40	31	13	16
26-35 (83)	48	18	20	13
Over 35 (16)	38	19	25	19
Unknown (10)	20	10	30	40
<u>Ethnicity</u>				
White (244)	34	34	16	16
Minority (173)	43	22	22	13
<u>Sex</u>				
Male (387)	40	28	18	14
Female (30)	13	40	27	20
<u>Employment Status</u>				
Student or Military (84)	27	36	24	14
Employed (112)	44	24	17	15
Unemployed (194)	38	28	18	16
Unknown - N.A. (27)	44	41	15	0
<u>Occupational Status</u>				
Student or Military (85)	27	34	25	14
Blue Collar (186)	47	27	18	8
White Collar (52)	37	27	13	23
Artisan, etc. (18)	39	28	11	22
Other, Unknown (76)	29	29	18	24
<u>Arrest Record</u>				
No Previous (158)	32	35	18	15
One Drug Arrest Only (24)	71	12	8	8
One Nondrug Arrest Only (39)	54	20	13	13
More than one Arrest (122)	42	25	20	13
Unknown (74)	26	31	23	20
<u>Scope of Prior Contact</u>				
No Prior Record (158)	32	35	18	15
Arrested; Not Convicted (59)	39	37	8	15
Convicted; Not Incarcerated (27)	48	26	22	4
Convicted and Incarcerated (67)	63	12	18	7
Unknown (106)	28	26	24	22
<u>Scope of Investigation</u>				
Spontaneous or nondrug (315)	40%	26%	20%	14%
Drug Investigation (102)	31	38	15	16
<u>Amount Seized</u>				
Less than 5 kg. of marihuana (40)	23	30	23	25
More than 5 kg. of marihuana (373)	40	29	18	13
Amount Unknown (4)	0	50	25	25

Most of the federal arrests and seizures in 1970 were made at or near the nation's borders by the Bureau of Customs (about 2,950 arrests) or the Immigration and Naturalization Service (477 arrests). Figure 1 illustrates the extent to which these arrests were made spontaneously—in the course of spot checks or routine inspections.

The remaining federal marihuana arrests in 1970 (420 arrests) were made by the Bureau of Narcotics and Dangerous Drugs, in that agency's effort to detect, investigate and terminate trafficking in the drug. Figure 1 shows that BNDD marihuana arrests were generally preceded by short-term investigations.

Since marihuana distribution is not a highly organized business, with defined chains of distribution, intensive investigation in this area is uncommon. Indeed, about half of the marihuana-related arrests arose from investigations into traf-

ficking in other drugs as well, particularly the hallucinogens.

Overall, a picture emerges of a blanket enforcement effort at the borders and ad hoc effort to disrupt a disorganized domestic trade. The consequence is a substantial number of cases involving small amounts of marihuana.

Figure 2 illustrates that a considerable number of persons arrested were referred to the states for prosecution. Cases against more than a tenth of the arrestees were dropped altogether. The enforcement agencies have chosen, in cooperation with the U.S. attorneys, not to burden the federal courts with large numbers of marihuana cases.

Figure 3 shows the comparative ultimate case dispositions of cases which were prosecuted at the federal level. Between half and two-thirds of the prosecutions resulted in convictions, particularly where other drugs or large amounts of marihuana were involved.

FIGURE 1

Scope of Investigation

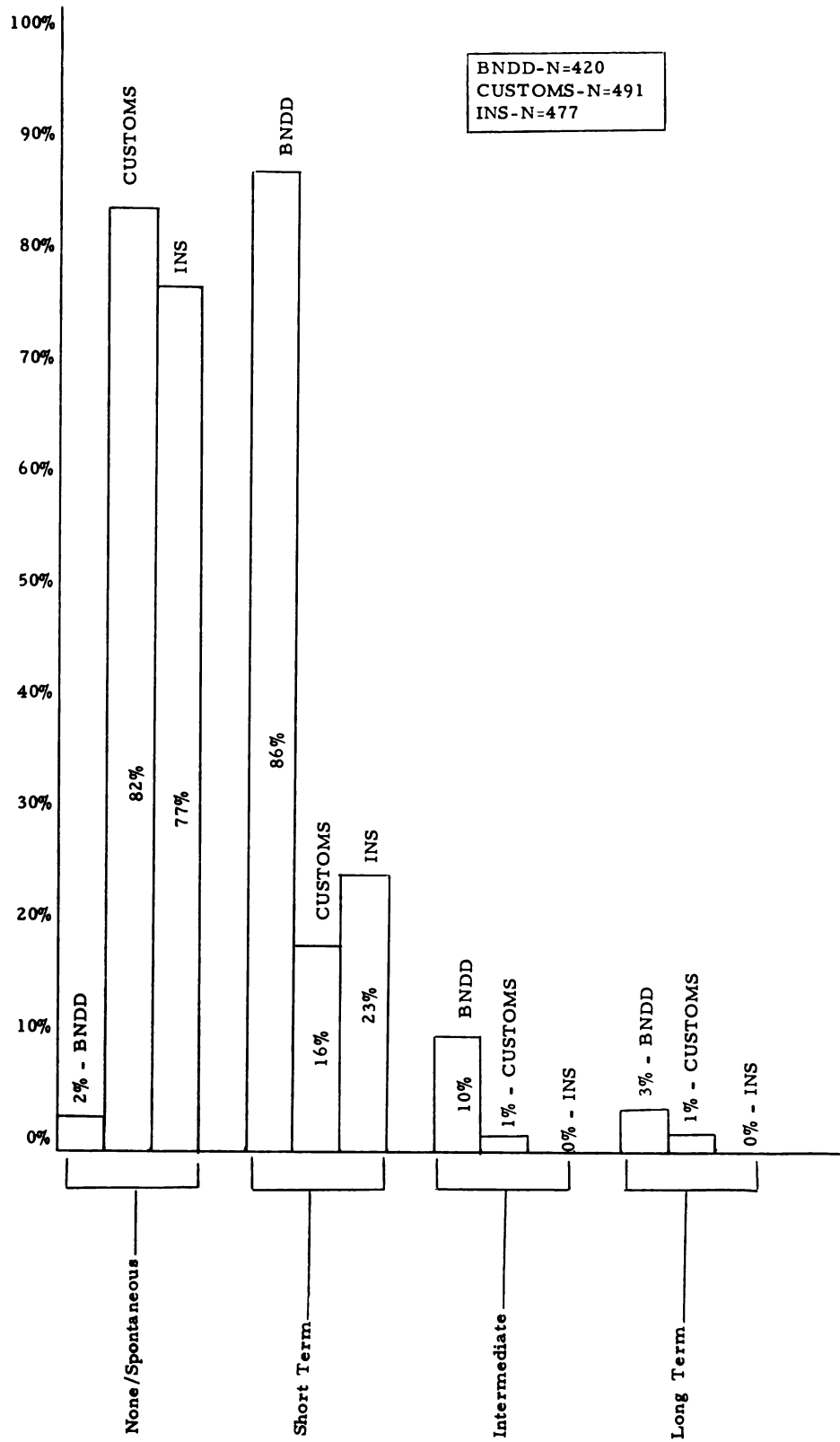


FIGURE 2

Initial Disposition of
Federal Arrests

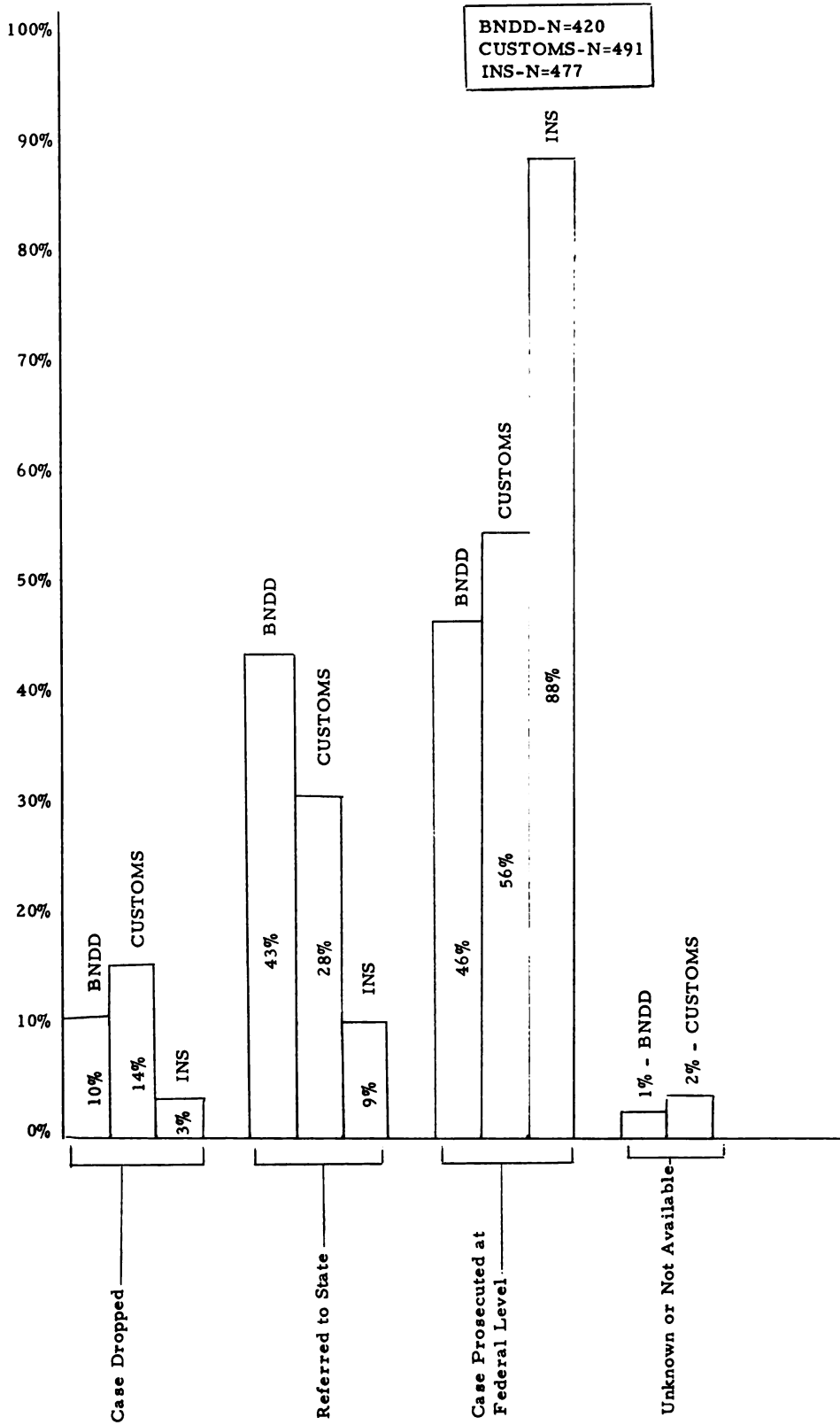
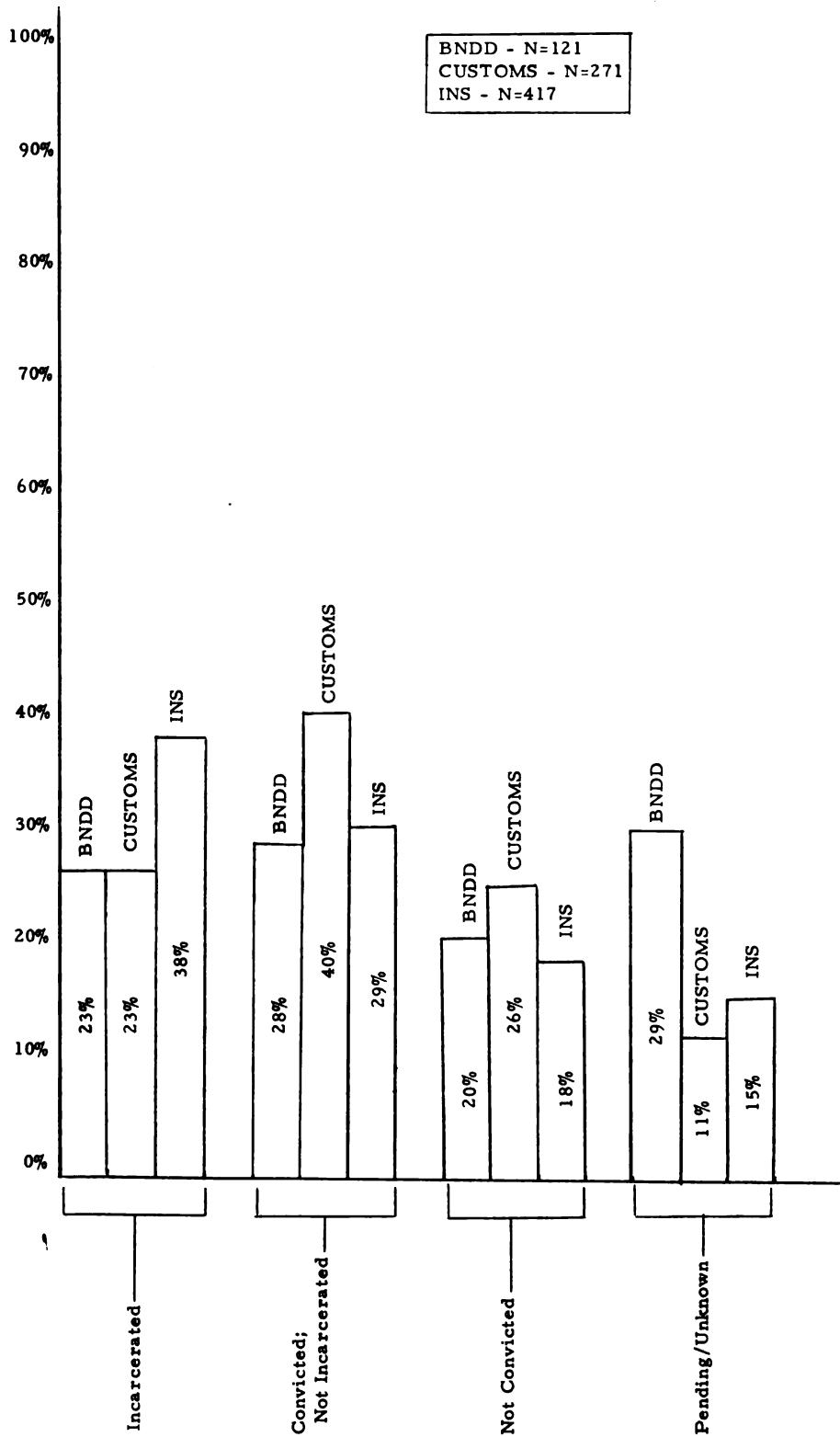


FIGURE 3

Ultimate Disposition of
Federal Defendants



III.

Opinion Within the Criminal Justice System

Chapters I and II have described the practice of police, prosecutors and judicial officials in regard to marihuana offenders. To gain an additional perspective regarding official policy, the Commission solicited the opinion of prosecuting officials and court officials at the state level. By and large, the opinion data parallel the behavioral patterns developed in the preceding pages.

Prosecutorial Opinion

Inquiry into the operation and efficacy of a particular law would be incomplete without a full study of prosecutorial opinion. Local District Attorneys are an obvious source of information as to numbers of marihuana arrests and convictions, and as to the relationship between marihuana use and crime. However, it is their evaluations of the effectiveness of the marihuana laws which are particularly important to the Commission's study.

When illegal conduct increases as precipitously as has marihuana use in recent years, participants in the criminal justice system respond in different ways. Prosecutorial response is particularly significant.

First, prosecutors have an ideal vantage point from which to describe how the system actually

reacts to an increase in illegal conduct, and to formulate opinions about appropriate institutional responses. Second, prosecutors conduct one of the stages in the decision process, beginning with arrest, that determine which offenders will be tried and for what specific offenses. The power of prosecutors to determine whom, when, and for what to prosecute is the power to modify or reduce the effect of any given law. In actual practice a consistent decision not to prosecute in certain circumstances (other than lack of evidence) amounts to *de facto* repeal. Third, and of equal importance, police departments work closely with local District Attorneys. Arrest practice is likely to result from policies arrived at in conjunction with the office of the prosecutor.* Finally, since they are often elected officials, prosecuting attorneys tend to reflect the public opinion of their jurisdictions.

METHODOLOGY

With these reasons in mind, the Commission decided to conduct a survey of District Attorneys

*In this regard, of note are two District Attorneys from jurisdictions representing in excess of 100,000 persons who indicated that no cases had been brought to them for prosecution. In jurisdictions of this size, it is highly unlikely that there is no marihuana use.

in an effort to gather statistics on arrests and convictions stemming from marihuana law violations, to ascertain actual policies and practices at the local level, to secure information concerning the manner and degree to which these policies and practices affect the legal control of marihuana use, and to solicit their opinions regarding the control of marihuana and the handling of those who violate the marihuana laws.

The Sample

The Commission's decision to limit the survey to a sample of county chief prosecutors, representative in terms of geographic location, size of jurisdiction (population served) and size of marihuana caseload, necessitated foreknowledge of the universe of such prosecutors. A request for a list was forwarded to the National District Attorneys' Association. Because membership in this organization is neither compulsory nor restricted to state prosecuting attorneys, however, the list promptly supplied by the Association was found to be unsuited for the purpose intended.

In a further effort to obtain an accurate and complete mailing list of chief prosecutors, each state's Office of the Attorney General was contacted individually by telephone. Through their cooperation, the Commission received by mail, generally within 72 hours, the names and mailing addresses of every chief prosecutor in the fifty states.

With the list in hand, a decision was made to survey each of the District Attorneys (rather than a sample of these), and on August 20, 1971, the Commission mailed a total of 2,428 questionnaires with requests to complete and return them in the envelope enclosed for that purpose within approximately three weeks of their receipt.

The Questionnaire

The research instrument, developed by the Commission staff, is composed of seven parts:

- I—Prosecution Policy
- II—Group Arrests
- III—Other Offenses
- IV—Police Policy
- V—Sanctions
- VI—Marihuana and Public Policy
- VII—Background Information

A copy of the instrument is included in the supplement at the end of this section.

In addition to the objectives set out above, it was hoped that the results of this questionnaire would aid the Commission in determining:

- The extent to which prosecutors use their discretion to modify the existing marihuana laws.
- The extent to which prosecutors who are "lenient" in foregoing prosecution or in recommending probationary dispositions are the same prosecutors who favor a change in the existing laws.
- The opinions and attitudes of persons responsible for the enforcement of marihuana laws regarding use of the drug.
- The probable nature of prosecutorial response when it becomes apparent that the sheer number of marihuana violations makes full enforcement of the existing law impossible.
- The extent to which similar laws are applied differently in different jurisdictions.
- The extent to which these particular enforcement officials favor a change in the law and the nature of the changes favored.

Response Rate

By the deadline date for the return of questionnaires established by the Commission staff, the Commission had received a total of 1,095 responses or 45.1% of the total originally mailed.¹ Of these, 807 were complete enough to include in the final tabulation and analysis; 278 were returned by the prosecutors with notice that the absence of marihuana-related cases in their counties precluded completion of the questionnaires. Only 10 of the District Attorneys refused to cooperate.

In a subsequent effort by the Commission staff to determine the proportion of the individual states' and the national population represented by the responding attorneys, the population of all counties in each of the states was obtained from the 1970 census.² Tabulations based on these census figures revealed that the attorneys who responded represented 47.2% of the 1970 resident population of the United States.

In the process of compiling figures on the percentage of the state and national populations represented by the returns, the staff learned that 34 counties in 17 states (representing 7,226,332 persons) were inadvertently omitted from the mailing

¹ Completed questionnaires from 31 attorneys were received too late to be included in the data analysis. The counties they represent contain, together, a total of 5,411,911 persons.

² U.S. Department of Commerce, Bureau of the Census, *Current Population Reports: Population Estimates and Projections*, Series P-25, No. 461, Washington, D.C.: U.S. Government Printing Office, June 28, 1971.

TABLE 1*
THE TALLY OF RETURNS

<u>State</u>	<u>Sent Out (No.)</u>	<u>Completed (No.)</u>	<u>No Cases (No.)</u>	<u>Refusals (No.)</u>	<u>Rate of Return ** (%)</u>	<u>Population Represented *** (%)</u>
Alabama	36	11	2	-	36.1	36.3
Alaska	5	2	1	-	60.0	35.4
Arizona	14	9	-	-	64.3	71.8
Arkansas	18	7	-	-	38.9	40.8
California	59	30	-	-	50.8	68.8
Colorado	22	11	1	-	54.5	74.7
Connecticut	8	4	-	-	50.0	59.3
Delaware	1	1	-	-	100.0	100.0
Florida	20	9	-	1	50.0	39.3
Georgia	40	16	3	1	50.0	35.2
Hawaii	4	4	-	-	100.0	100.0
Idaho	44	20	10	-	68.2	58.8
Illinois	102	22	13	-	34.3	62.9
Indiana	84	36	7	-	51.2	25.2
Iowa	99	42	15	-	57.6	38.6
Kansas	104	40	20	-	57.7	59.6
Kentucky	171	25	26	-	29.8	41.3
Louisiana	33	9	1	-	30.3	32.3

* Graphs of the percentage response by state population are included at the end of this Survey.

** $2+3+4/1$

*** Based on 1970 census data

TABLE 1*(continued)
THE TALLY OF RETURNS

<u>State</u>	<u>Sent Out (No.)</u>	<u>Completed (No.)</u>	<u>No Cases (No.)</u>	<u>Refusals (No.)</u>	<u>Rate of Return** (%)</u>	<u>Population Represented*** (%)</u>
Maine	16	6	1	-	43.8	32.0
Maryland	23	8	1	1	43.5	46.9
Massachusetts	9	5	-	-	55.6	39.6
Michigan	82	36	4	2	51.2	20.2
Minnesota	87	33	16	-	56.3	61.9
Mississippi	81	11	9	-	24.7	22.0
Missouri	115	27	19	1	40.9	43.7
Montana	56	11	13	-	42.9	36.1
Nebraska	92	25	30	-	59.8	69.0
Nevada	17	7	-	-	41.2	85.0
New Hampshire	10	5	2	-	70.0	64.6
New Jersey	21	9	-	-	42.9	45.3
New Mexico	13	8	-	-	61.5	44.7
New York	58	24	1	-	43.1	41.2
North Carolina	30	15	-	-	50.0	54.2
North Dakota	53	10	12	-	41.5	40.6
Ohio	84	28	6	-	40.5	52.0
Oklahoma	27	12	-	-	44.4	50.5
Oregon	35	18	-	-	51.4	37.3

TABLE 1* (continued)
THE TALLY OF RETURNS

State	Sent Out (No.)	Completed (No.)	No Cases (No.)	Refusals (No.)	Rate of Return** (%)	Population Represented*** (%)
Pennsylvania	68	22	3	-	36.8	26.2
Rhode Island	39	10	3	-	33.3	32.5
South Carolina	20	3	-	1	20.0	15.9
South Dakota	62	13	17	1	50.0	39.5
Tennessee	26	14	-	-	53.8	55.6
Texas	87	33	4	-	42.5	52.6
Utah	28	10	4	-	53.6	44.9
Vermont	14	5	1	-	42.9	49.6
Virginia	122	25	18	1	36.1	30.4
Washington	39	22	-	-	56.4	72.3
West Virginia	55	9	13	-	40.0	40.0
Wisconsin	72	34	2	1	51.4	65.0
Wyoming	23	11	-	-	47.8	43.4
TOTAL	2,428	807	278	10	45.1	47.2

list compiled by the Commission staff.* To some unknown extent these omissions may have biased the results of this study. However, because of their

* These omissions are, in part, attributable to the fact that contrary to the staff's expectations, there is not necessarily a one-to-one relationship between the District Attorney and the county served. Although this is the case in most instances (i.e., a separate District Attorney for each county), there are several states in which one prosecutor serves several counties and a few states in which the prosecutorial duties in a given county are divided among two or more District Attorneys.

dispersal in terms of both geographic location and size of population, the bias they might introduce is probably insignificant.

Table 1 shows, by state, the number of questionnaires originally mailed, the number returned by the deadline date (completed, "no cases" and refusals), the rate of return, and the proportion of the population represented by these returns.

Tables 2 and 3 present the "no cases" reported and the number of refusals by state and population of jurisdiction.

SURVEY OF PROSECUTING ATTORNEYS

TABLE 2

"NO CASES" REPORTED BY STATE AND POPULATION OF JURISDICTION

	Under 1,000	1,000 - Under 2,500	2,500 - Under 5,000	5,000 - Under 10,000	10,000 - Under 25,000	25,000 - Under 50,000	50,000 - Under 100,000	100,000 - Under 250,000	250,000 - Under 500,000	500,000 - Under 1,000,000	Over 1,000,000	Total
01 Alabama					2							2
02 Alaska						1						1
03 Arizona												0
04 Arkansas												0
05 California												0
06 Colorado							1					1
07 Connecticut												0
08 Delaware												0
09 Florida												0
10 Georgia			1			1						3
11 Hawaii												0
12 Idaho	2	4	1	3								10
13 Illinois			3	10								13
14 Indiana					3	3	1					7
15 Iowa			1	13		1						15
16 Kansas		8	6	5	1	1						20
17 Kentucky		3	4	13		5	1					25
18 Louisiana						1						1
19 Maine			1									1
20 Maryland							1					1
21 Massachusetts												0
22 Michigan				4								4
23 Minnesota			4	11				1				16
24 Mississippi		1	2	4		1						9
25 Missouri		2	5	9		3						19

SURVEY OF PROSECUTING ATTORNEYS

TABLE 2 (continued)

"NO CASES" REPORTED BY STATE AND POPULATION OF JURISDICTION (continued)

	Under 1,000	1,000 - Under 2,500	2,500 - Under 5,000	5,000 - Under 10,000	10,000 - Under 25,000	25,000 - Under 50,000	50,000 - Under 100,000	100,000 - Under 250,000	250,000 - Under 500,000	500,000 - Under 1,000,000	Over 1,000,000	Total
26 Montana	2	4	2	2	3							13
27 Nebraska	2	7	4	14	3							30
28 Nevada												0
29 New Hampshire						2						2
30 New Jersey												0
31 New Mexico												0
32 New York						1						1
33 North Carolina												0
34 North Dakota			6	4	2							12
35 Ohio					6							6
36 Oklahoma												0
37 Oregon												0
38 Pennsylvania					2	1						3
39 Rhode Island	1	1	1	1								3
40 South Carolina												0
41 South Dakota	1	1	7	5	3							17
42 Tennessee												0
43 Texas				1	1	1	1					4
44 Utah	1	1	1	1	2							4
45 Vermont			1									1
46 Virginia	1		7	7	7	3						13
47 Washington												0
48 West Virginia				5	5	2	1					13
49 Wisconsin				1	1							2
50 Wyoming												0
GRAND TOTAL	7	15	39	69	112	27	7	2				278

SURVEY OF PROSECUTING ATTORNEYS

TABLE 3
REFUSALS BY STATE AND POPULATION OF JURISDICTION

	Under 1,000	1,000 - Under 2,500	2,500 - Under 5,000	5,000 - Under 10,000	10,000 - Under 25,000	25,000 - Under 50,000	50,000 - Under 100,000	100,000 - Under 250,000	250,000 - Under 500,000	500,000 - Under 1,000,000	Over 1,000,000	Total
09 Florida								1				1
10 Georgia							1					1
20 Maryland							1					1
22 Michigan						1				1		2
25 Mississippi								1				1
40 South Carolina				1								1
41 South Dakota			1									1
46 Virginia					1							1
49 Wisconsin							1					1
TOTAL			1	2	2	1	3	2		1		10

TABLE 4
PERCENTAGE OF DISTRICT ATTORNEYS RESPONDING IN THE FIFTY STATES

<u>Percentage</u>	<u>Number of States</u>
0 - 10	0
11 - 20	1
21 - 30	3
31 - 40	9
41 - 50	17
51 - 60	14
61 - 70	4
71 - 80	0
81 - 90	0
91 - 100	2

TABLE 5
STATE POPULATION BASE REPRESENTED BY RESPONDING ATTORNEYS IN
THE FIFTY STATES

<u>Percentage</u>	<u>Number of States</u>
0 - 10	0
11 - 20	2
21 - 30	4
31 - 40	15
41 - 50	10
51 - 60	7
61 - 70	6
71 - 80	3
81 - 90	1
91 - 100	2

Table 4 shows the percentage of District Attorneys responding, and Table 5, the state population base represented by the responding attorneys in the fifty states.

FINDINGS

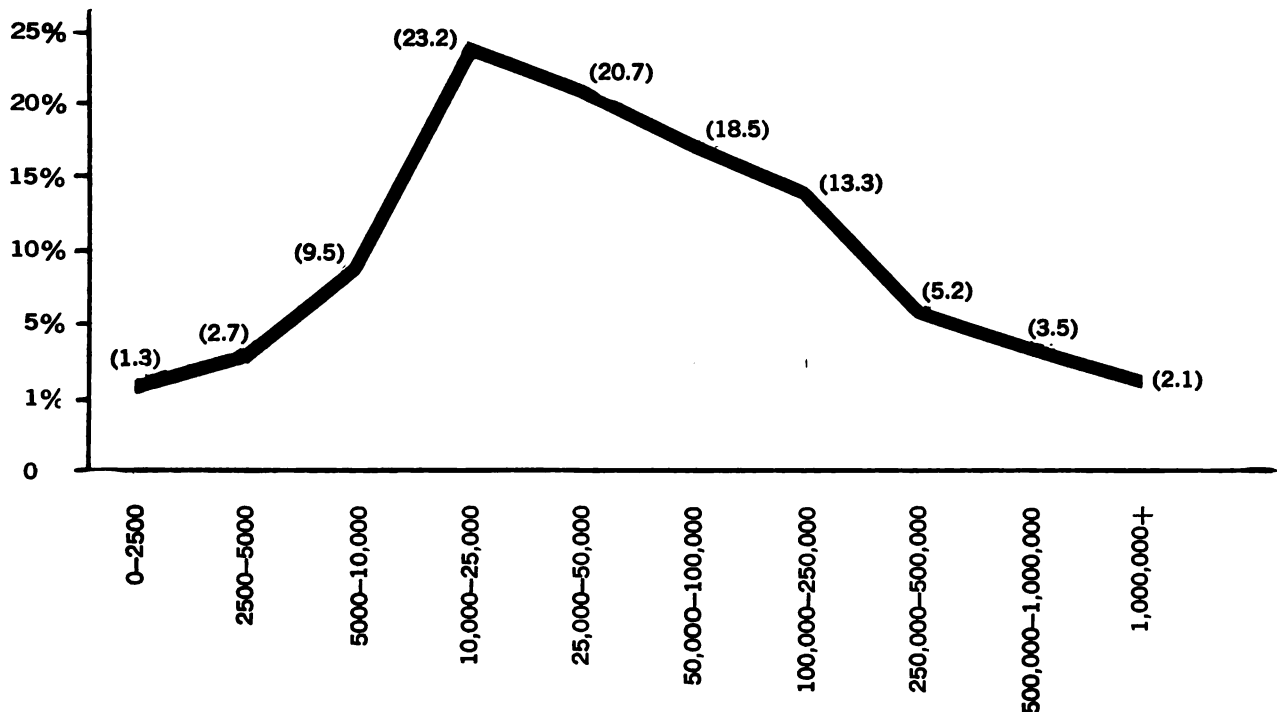
The discussion of findings⁴ will be organized under four different headings:

1. Jurisdictional Characteristics

2. Present Prosecution Policy
3. Attitudes Toward Marihuana Use and the Existing Marihuana Laws
4. Attitudes Toward Legal Change

I. Jurisdictional Characteristics

Population. The following is a graph of the population sizes represented by the jurisdictions responding:



The graph shows a somewhat modified bell curve with the number of jurisdictions responding with populations between 10,000 and 25,000 at the peak. Notably, populations of less than 50,000 constitute more than one-half of the sample jurisdictions, and, three-fourths are less than 100,000 in size. This suggests that the sample is weighted in favor of rural jurisdictions.

In fact, 47.3% of prosecutors responded that their jurisdiction was primarily rural, 41.8% replied that theirs was mixed rural and urban, and only 10.2% that theirs was primarily urban in

⁴ In evaluating and presenting the findings, the Commission has considered the comments found on certain questionnaires which arrived too late to be included in the statistical tabulation.

In some cases percentages in this Survey do not add to 100% because a few prosecutors responded that they "did not know" or gave "no answer" to a particular question. Where the number of prosecutors not responding is significant, it is so indicated.

character. Although the mixed category probably includes some suburban prosecutors, it is apparent that the nature of the sample to be considered is overwhelmingly rural. That the characteristic sample jurisdiction is small is also suggested by the average size of the prosecutor's staff.

More than three-fourths (77.4%) of the jurisdictions responding had 1 to 4 prosecuting attorneys and more than one-half of these (or about 40% of the sample) had only one prosecutor. 12.8% had 5 to 9 attorneys and 9.7% had more than 10 attorneys. Information on staff size parallels the information about population sizes graphed above.

Eighty-nine percent of jurisdictions reported that any attorney in the office may handle a drug case. In a few jurisdictions, however, the prosecutor's office, like many police departments, has a special "narcotics squad" which handles all drug prosecutions.

Incidence of Marihuana Arrests. The questionnaire attempted to collect figures on the incidence of marihuana arrests. At least one-third of all jurisdictions claimed that they did not know these figures or that they were unavailable, and an additional 10% failed to answer. The actual figures collected constitute responses from only 20% of the total sample and therefore are not statistically representative. Nonetheless, 44.6% of jurisdictions answering said marihuana prosecutions accounted for 50% or more of all drug prosecutions and about one-third said such prosecutions constituted 75% of all drug prosecutions. There was no particular pattern in the relation of drug prosecutions to other crimes. This is probably because of the low response rate; 48.6% indicated they did not know the figures involved.⁵

With respect to the type of arrests most frequently made in marihuana cases, again the data are incomplete. However, in the opinion of prosecutors responding the following trends do appear: (1) At the present time arrests are very rare for cultivation of marihuana, and for the sale of marihuana to a minor. (2) Among the small number of replies, there are more arrests for possession on the average than for sale. (3) The number of prosecutions to arrests is about 1 to 3, and of convictions to prosecutions, about 1 to 2. Although these statistics are merely suggestive and not in any way determinative, other statistical data confirm the finding that of those persons arrested a substantial number fall out of the system prior to prosecution. The other data also show that many more cases are dismissed before disposition.

II. Present Prosecution Policy

Pre-Trial Level. This survey attempts to delineate the extent to which prosecutors choose to use ancillary offenses and judicial rules, such as constructive possession, in securing convictions for marihuana arrests. Theoretically, the stronger the effort at control, the more enforcement officials will resort to such measures.

⁵The results of this survey indicate that prosecuting agencies do not keep adequate statistics on criminal activity. It is exceedingly difficult to evaluate the size of a given "crime" problem and the appropriateness of enforcement behavior without statistics on arrests, prosecutions and convictions. Almost half of the jurisdictions queried reported such statistics were unavailable. Moreover, the larger the jurisdiction and the greater the amount of crime, the fewer the statistics received. As it is preferable to base law-making on hard data rather than media emphasis or popular concern (the enthusiasms of which wax and wane inexplicably), the Commission recommends that action be taken to facilitate the compilation and maintenance of such statistics. One attorney suggested a computerized central information bank.

(a) *Use of Ancillary Offenses:* The principal ancillary offenses studied by the questionnaire were: (1) possession of narcotics paraphernalia, (2) possession of the implements of a crime, (3) maintaining a place where illegal drugs are sold or used, (4) maintaining an illegal establishment, and (5) narcotics vagrancy. More than 40% of prosecutors from jurisdictions having these offenses reported that they never used them in marihuana cases. Of those who did use them occasionally, an additional 23.4% had not prosecuted anyone for their violation in the last calendar year. In more than 60% of the jurisdictions having such laws, then, they are seldom, if ever, used.⁶

The second type of ancillary offense studied was one which can be used in connection with group arrests to secure convictions where actual use or possession of marihuana cannot be proved. We know from other studies conducted by the Commission that the overwhelming number of arrests made for marihuana possession are group arrests. It was the intention of this survey to determine how prosecutors exercise their discretion in a group arrest situation. Do they use the ancillary offenses and constructive possession rules available to them to prosecute the entire group arrested, and if not, how do they choose whom among them to prosecute?

Almost one-half of those jurisdictions which have the offenses "Being in or remaining in a place with knowledge that drugs are being used," or "Presence in an illegal establishment" never use them to prosecute marihuana cases. Population data also indicate that it is the large jurisdictions, not the small ones, which usually have this type of offense on the books.

Because of the exigencies of time, such an offense which requires less proof than simple possession might be a very attractive tool where caseloads are high. However, the average number of prosecutions in the last calendar year for either offense in any jurisdiction using these offenses was 15. In view of the high incidence of group arrests, it appears that prosecutors rarely resort to these laws in group situations.

(b) *Use of Constructive Possession:* An alternate measure available to 68.6% of prosecutors who desire to prosecute a number of persons arrested as a group, is the use of "constructive possession." Constructive possession is a legal fiction established by judicial precedent which permits conviction of persons arrested in an area where marihuana was found, but who did not actually have possession of any marihuana themselves.

⁶Of course, they may be used to secure convictions in other drug cases.

Whether or not the constructive possession rule is broadly or narrowly used, indeed, whether it is used at all, is completely within the discretion of the prosecutor.

About 13% of prosecutors having such rules responded that they never prosecuted anyone when a group is arrested at a party or social gathering where some marihuana is found and no one admits possession. If only one cigarette were found, 31.4% would prosecute no one. At least 12% of prosecutors, then, never use constructive possession in a party situation and an additional 19% do not use it if the amount of marihuana seized is one cigarette or less, even knowing that it is customary for more than one person to smoke the same cigarette. In contrast, 24% would always prosecute everyone on the premises.

Insofar as the remaining 63% select whom to arrest: 34% exercise their discretion by always arresting the owner or lessee. About 20% base their decision on the amount of marihuana present. A very few base their decision on whether or not the marihuana was within reach of the parties arrested.

The constructive possession rule is also used in connection with vehicular arrests. In such arrests, where marihuana is found and no one claims possession, only 3.8% would arrest no one, and 19.6% would arrest everyone including the owner of the car, if the owner and the driver were not the same person, even if the marihuana were hidden. Where the marihuana was visible 36% would prosecute everyone in the vehicle. Vehicle arrests are frequently harrassment arrests, directed at immobilizing persons with certain visible life styles. This may explain the greater inclination to use constructive possession to arrest everyone in a vehicle than at a so-called "pot party".

Again, in deciding whether or not to use constructive possession, or in choosing whom to prosecute among the occupants of the vehicle, prosecutors have wide discretion. In both the party situation and the vehicle situation, prosecutors indicated they consider the location or the amount of marihuana involved. It appears that most of these decisions depend on the prosecutor's view of the potential defendant's attitudes. Whether or not prosecutors elect to use the rule at all may depend on their attitude toward the use of marihuana and the marihuana laws in general. This hypothesis will be tested in the interpretation section of this study.

From the above findings, prosecutors appear to be relatively unwilling to convict marihuana users of ancillary offenses. Nevertheless, they are frequently willing to use the legal fiction constructive possession to prosecute multiple arrests.

(c) Factors influencing Prosecutorial Discretion: When the incidence of arrests for a particular offense are high, prosecutors often develop standards for exercising their prosecutorial discretion. Lack of evidence, of course, is the "rubric" under which prosecutors avoid prosecution in all cases.⁷

Prosecuting attorneys are willing to admit that they avoid the full implication of the criminal law against marihuana possession on grounds other than lack of evidence. The survey shows that in addition to those citing lack of evidence as a reason for their decision not to prosecute, a substantial number of prosecutors said that they are also influenced by other factors. As a group they are especially reluctant to prosecute young neophytes for simple possession.

In supplying the reasons which most frequently figured in their decisions not to prosecute persons arrested for possession, 40.6% cited the age of the arrestee, 37.7% considered the lack of a prior record, 35.9% weighed the small amount of marihuana seized, and 26.1% pondered the family situation of the accused. To the extent that the prosecutors weighing one of these factors also always weighed age, more than 40% of prosecutors decide not to prosecute offenders for reasons which are completely within their discretion.

None of these factors bear as strongly on the decision whether to prosecute persons apprehended for the sale of marihuana. Nonetheless, a significant number of prosecutors still consider certain circumstances as mitigating, and the following percentages indicated that they would not prosecute for the following reasons. Nineteen percent weighed the youth of the offender, 15.7% his

⁷ Even so, it should at least be remarked in passing that difficulties of proof are very much a problem particular to drug cases where evidence must be procured by search or by police methods which, in addition to Constitutional problems, may raise questions of entrapment. One District Attorney expressed his exasperation in this regard, as follows:

"Concealment of marihuana is easily had on one's person and our Constitution of 1776 offers strong protection against invasion of privacy or search of one's person, home, or apartment. In 1776, the United States did not have a drug problem and if it did, I am sure the Fourth Amendment of the Constitution would have had a subsection allowing a little more latitude to law enforcement agencies in the drug area. [If we are to enforce the law now] the Fourth Amendment protection afforded individual citizens must be relaxed."

On the other hand, more than one attorney thought the encroachment on privacy necessary in order to enforce the drug laws engenders disrespect for the law.

"The search and seizure difficulties and encroachments of drug law enforcement, are disillusioning an entire generation and adding to a general disrespect for all law enforcement activity."

lack of a previous record, and 16.7% the small amount sold. Each of these factors was given at least twice as frequently as a reason not to prosecute for possession, pointing to the consensus that selling is the more pernicious offense.

Prosecutors seem inclined to view possessors of marihuana as relatively benign criminals. In possession cases, not only did a substantial number of prosecutors consider factors other than lack of evidence in their decisions not to prosecute, but also 31.1%^a willingly admitted that one of these other factors was the most important single factor they considered. These prosecutors actually modify the marihuana laws by their general practice of not prosecuting when the offender is young, the amount of marihuana is very small, or for some other unspecified reason.

Another interesting prosecution policy came to light in the study. 8.1% of the total sample stated that they always prosecuted everyone. These prosecutors espouse what can only be called the conscientious view that to do otherwise would change the law.

As one prosecutor emphasized:

"Once again this office is not the legislature and as long as these matters are punishable by law, we will instruct our police officers to enforce the law and we will not make value judgments as to whether or not the law is right or wrong."

and another:

". . . drugs, including marihuana, are the greatest menace to our present society. I recommend prosecution in every case."

(d) Rules of Thumb: The questionnaire sought to determine whether in any situation a particular factor influencing decisions not to prosecute had attained the stature of a "rule of thumb." For example, did any prosecutors use a rule of thumb in deciding how much marihuana must be seized to justify prosecution for possession or sale? Although most prosecutors reported that they did not have any minimum amount rule, 7.4% in the case of possession, and 5.1% in the case of sale, reported that they did have such a policy. Of those having such a policy, 12.2% reported that it was set by statute. Therefore, in 87.8% of all cases where a minimum amount policy was then in effect, the actual amount had been set at the prosecutor's discretion. This figure demonstrates the magnitude of the prosecutor's role in *de facto* modification of the law.

The responses concerning use of a minimum amount rule of thumb are important for another

^a 25.2% think either age, small amount or personal situation are most important; 5.9% find lack of prior record determinative.

reason as well. In 88% of those jurisdictions where the prosecutor used such a rule in deciding whether or not to prosecute, this rule had been communicated to the police department, thereby demonstrating one way in which prosecution policy affects arrest policy.

The Arrest Level. This survey presupposed that, at the arrest level, the amount of police effort directed at marihuana violations would indicate whether such violations were considered especially significant at the prosecutorial level. 51.1% of all prosecutors indicated that to their knowledge the police did not investigate traffic in marihuana independently of hard drug traffic. 47% indicated that their police departments did so investigate, and only 2% reported that they did not know.

These same prosecutors, indicated that it was their belief that most marihuana arrests arise either from investigation directly into marihuana traffic or into hard drug traffic. Other studies of law enforcement practices show that most marihuana arrests are accidental, that is, that they arise from street arrests, vehicular arrests, and investigation into non-drug complaints. One possible explanation for the contrary finding here is that the population of the sample is overwhelmingly rural. Indeed, in several major urban areas the police departments make no effort at all to investigate marihuana cases. (See Part Four, Chapter I.)

The Disposition Level. (a) Use of Informal Probation: This survey attempts to determine the influence of prosecutorial discretion at yet another level in the criminal justice process, the level at which decisions concerning what sanctions to impose are made. To this end, it inquires as to the use of the technique of informal probation as a condition for withholding prosecution. More than one-fourth (29.2%) of all prosecutors reported that they make use of this technique. In exercising their discretion as to whether or not to offer informal probation as a condition for withholding prosecution, about 90% of the prosecutors who use the technique are influenced by the relative youth of the offender, 33% by his lack of prior record, and 45% by promises to testify.

Prosecutors who indicated that they disapproved of this technique argued that its use and the publicity given to its use interfere with the deterrent effect of the marihuana laws. They prefer a less *de facto* solution to the marihuana problem.

One such prosecutor stated, "Punishment is a deterrent, probation is a farce." Another remarked that, in his experience, "Mere probation without any 'jail time' had proved ineffective." And still another summed up this attitude as follows:

". . . the penalties (for marihuana use) must be reduced, but 'teeth' must be put into the reduced penalties.

If people are aware that they will be punished for a violation . . . instead of having their hands slapped . . . it seems to deter (them)."

(b) Other Dispositional Recommendations: Regardless of whether they make use of informal probation or not, 79.1% of all prosecutors reported that they took an active part in recommending the appropriate sentence or other disposition in cases culminating in conviction. Thus, at the final stage of the decisional process in marihuana cases, the prosecutor's discretion again plays a role. The nature of the recommendation a prosecutor chooses to make upon disposition of a case is entirely within his discretion. By consensus the most important factors affecting these recommendations in order of importance are: (1) the defendant's lack of record, (2) whether the charge is possession or sale, and (3) the defendant's attitude. Generally thought to be of lesser importance but still influential are the age of the offender and the amount of marihuana seized. It is interesting to note that the prosecutors admitted that at this stage in the criminal process their appraisal of the defendant's attitude was an important factor behind their decision concerning the disposition of his case.

These findings show that at every stage in the judicial process, the discretion of the prosecutor is of immense importance in selecting not only who will be prosecuted but also who will be convicted, what sentence will be imposed, and even who will be arrested.

III. Attitudes Concerning the Effects of Marihuana Use and the Existing Marihuana Laws

This part of the survey explores the rationale behind the present marihuana laws, that is, to what extent marihuana use is believed to be harmful and subject to deterrence by legal means.

Effects of Use. (a) On the User: The first focus of these questions was toward prosecutors' beliefs about the actual physiological and psychological effects of marihuana use. A considerable number of prosecutors stated either that they did not know what these effects were or that the effects were as yet unknown to medicine and science. 58.3% said they did not know the physiological effects of use, and 43.3% could not evaluate its psychological effects. These responses are illustrative of the commonly held view that insofar as the evidence on marihuana is not complete, society should wait before condoning the addition of another drug to the general marketplace. In the words of one District Attorney: "The jury is still out on Marihuana."

Some exponents of this view felt that once the harm or lack of harm in use was established, rigorous action consistent with that determination should be taken. One recommendation read:

"I recommend that the Commission determine scientifically, if possible, whether marihuana has such a detrimental effect upon users or those [who] might chance to come in contact with them, that its use presents a substantial hazard to the health and welfare of society in general.

If it does not, I would recommend complete legalization. On the other hand, if its detrimental effects can be established, I recommend maintaining the present system of law. . . .

I do not believe that some of the half-way measures and compromise solutions that have been put forth from time to time should be instituted. Such measures, I believe, will result in displeasing a large number of people without any beneficial effect."

Of those prosecutors willing to venture opinions about the effects of marihuana use, 24.8%, or about half of them, thought that use had little or no physiological effect, or that the effects that it did have were harmless. 16.6% thought that either nerve damage, hallucinations, or drowsiness resulted from marihuana use—these effects being regarded in greater or lesser degree as harmful.

There was more certainty that the psychological effects of use were undesirable, if not positively harmful. 43.2% thought that escapism, loss of motivation, or dependency were traceable to the use of marihuana. The psychological effects prosecutors chose to enumerate, are psychological effects with social significance. Prosecutors seem more impressed by what could be called marihuana's inducement to drop out of the cultural mainstream than any individual harm it might cause, such as psychoses or neuroses. In either case, it is the high rate of no response at all, rather than the nature of the responses given, which is interesting.

Though many prosecutors thought that they could not describe the physiological or psychological effects of marihuana use, when specifically queried, 74.3% agreed that marihuana use leads to the use of hard drugs. Agreement with this proposition, however, is not necessarily agreement with suppression of the drug by law. Some persons who believe that use puts one in touch with the illegal drug culture thus facilitating procurement of other more dangerous drugs, also believe that legalizing the use of marihuana would destroy this connection. One such prosecutor stated:

While use of marihuana apparently does not lead to use of harder drugs, creation of a drug culture certainly does. Many who might stop with marihuana—as the many drinkers who stop with alcohol—are, under the present system enticed or pushed into use of harder drugs as a result of the equal illegality of all drugs.

The view that marihuana leads to hard drug use is the most widely accepted reason for its suppression. One prosecutor commented:

Our young people smoke marihuana not because they like the taste or the smell of it, but because they like the hallucinogenic effect. Consequently, 95 out of every 100 who use marihuana regularly for any period of time also use other hallucinogenic drugs such as LSD. . . . While the use of marihuana does not create in the individual a physical dependence on narcotic drugs, it does create a psychological conditioning whereby a certain percentage of those who begin with the use of marihuana eventually become addicted to hard drugs.

The disproof of any such causal connection may eliminate a major support for criminal laws against marihuana use.

In addition to the so-called "stepping-stone theory", another reason for the suppression of marihuana was that its use was believed to induce the commission of violent crime. The questionnaire asked whether or not use leads to aggressive behavior and 38.5% of prosecutors responded positively.

(b) On society: The questionnaire next inquired about the effects of marihuana use upon society. An attempt was made to evaluate to what extent prosecutors view the increase in marihuana use as socially harmful or expressive of the division between generations. Ultimately it was hoped that an interpretation of the responses here would indicate whether or not prosecutors had a negative attitude toward marihuana use because of its symbolic effects. The problem with this approach is that whatever one's attitude toward marihuana, the increase in its use clearly began with young students, and to a considerable extent [though this is changing with time and the inevitable aging of yesterday's young] is still predominantly a phenomenon of youth.

Even so, the survey findings show that 40.8% of prosecutors do not hold the young particularly responsible for the growth in marihuana use. Instead, one-fourth thought that it was an indication of social acceptance of drug use in general. Moreover, of the 45% who did associate the phenomenon primarily with youth, only 18.8% thought that it was a form of protest. An additional 4.2% thought that the increase in use was a fad, 11.7% that it was due to a combination of all the reasons given above, and a few indicated other reasons of interest to the Commission. For example:

"To generalize, I believe many users partake of marihuana to escape from societal pressures. Among young men I feel the Vietnam War is a significant . . . factor . . . I think young people are disenchanted with a political system that, to them promotes hypocrisy, duplicity, and compromise of ideals. Many young wish to turn this off

in their minds. I do not think it unfair to say that today's youth are subject to pressures not encountered by previous generations."

Another remarked:

". . . television abounds with advertisements of various drugs that 'pick you up' or gently 'let you down,' . . . It is quite clear that this country with its superhighways and megalopolises, pop culture and plastic beauty is a drug oriented culture. When I read something in the media about the drug culture, I think of the housewife popping 'Bennies' or the businessman dropping 'downers'.

"The price that our standard of living exacts from the participants is the pollution of body and soul—not just by underground drugs, but by drugs with Good Housekeeping seals [of approval]."

The Present Laws as Deterrents. Having sampled prosecutors' views of the effects of marihuana use, the survey now focused on their opinions of the success of the present legal scheme in controlling use.

According to the prosecutors questioned, the best case made for the deterrent value of the marihuana laws is that they significantly deter users from using marihuana openly [62.2%] and persons over thirty from initiating use [43.6%].⁹ In contrast, more than 50% agreed that these same laws do not, or only minimally, deter users from using regularly [56.1%], from transferring small amounts for little or no consideration [55.1%]¹⁰ and persons under thirty from initiating use [53.2%]. A majority of prosecutors also agreed that the laws moderately deterred sales for profit [67.2%] and persons over thirty from continuing use [67.7%]. As to whether or not the laws deter persons under thirty from continuing use, the prosecutors were about equally divided.

Apparently, the marihuana laws in the opinion of prosecuting officials, are not a deterrent to persons under thirty, and are only partial deterrents to those over thirty. Insofar as the laws are deterrents, they deter persons from getting caught; that is, they do not deter use itself; they merely discourage open use of the drug.

The Type of Penalty Structure Best Suited to Deterrence. In evaluating the type of penalty structure most likely to actually deter marihuana "crimes" the great majority [58.6%] of prosecutors agreed that incarceration was not the primary deterrent to possession or use. To be specific: 31.6% thought that the threat of prosecution was

⁹ A relatively large percent of prosecutors believe that insofar as the marihuana laws deter anyone at all, they deter persons over 30 from initiating use. Use has not increased as significantly among the older generation. Certainly the number of persons over 30 arrested for possession of marihuana is substantially lower than of those under 30. (See Part Four, Chapters I and II.)

¹⁰ Almost all users acquire their marihuana by this sort of transfer.

the primary deterrent, 22.7% that it was the threat of some incarceration, 17%, the stigma of arrest for criminal conduct, and 10% the existence of the law itself. In all, 94.3% did not regard the threat of lengthy incarceration as the principal deterrent to use.¹¹ Only 5% were convinced that lengthy incarceration was more effective than some incarceration in deterring use.

Despite the above finding, 66.7% thought felony penalties were as a general rule stronger deterrents than misdemeanor penalties, and 65.8% agreed that a one year sentence deterred more than a thirty day penalty. Although these views predominate, some responses were forecast by the earlier finding that incarceration is not a principal deterrent. More than one-fourth of all prosecutors disagreed with the prevalent view that the greater the penalty, the stronger the deterrent, by stating that such penalties deterred about equally. Moreover, 37.7% indicated that they thought a petty violation applied consistently deterred the same, or more than, the threat of incarceration sporadically applied. This response does not accord with a later finding as to the number of prosecutors willing to adopt such a violation scheme for control of marihuana use.¹² Apparently prosecutors replying that petty violations were effective deterrents did so as much because they believe inconsistency impairs deterrent value, as because they believe in the scheme itself.

Most prosecutors believe they cannot enumerate the actual harms of marihuana and revert to the supposed harms which were the traditional reasons for the suppression of marihuana use. Although prosecutors disagree about the effects of the drug, they are in accord as to the effect of the drug laws; the majority do not believe that these laws really deter use.

IV. Opinions About Changing the Marihuana Laws

Opinions With Respect to Present Trends in the Law. In examining prosecutor opinion concerning whether any change in the present legal scheme for the control of marihuana use is desirable, the survey examined opinions regarding existing trends toward change. In view of the 72.1% of prosecutors who reported that first offenders customarily received only fines or probation in their

jurisdictions, it was surprising that only 47.7% (or almost 25% less) agreed with the present judicial and legislative trend to preclude or limit incarceration. This finding is also somewhat confusing when compared with the 58% of prosecutors who do not believe that it is the threat of incarceration which deters use.

Among those who favored the trend, the reasons given were diverse. They included the following: the ill effects, if any, of use have not been sufficiently proved, marihuana users should be helped rather than punished, and that a criminal record should not result from an activity which does not endanger others. One prosecutor quipped: ". . . everyone is entitled to cut his throat his own way." Another was more philosophical:

"... the government should only attempt to restrict behavior which interferes with another person's freedom of action or choice to an intolerable degree. Thus, the money now being spent on marihuana regulation should be directed against organized crime and against poverty . . ."

A third remarked:

"In my view marihuana is much more a social and/or medical problem than a criminal one. It does not serve the public interest to retain a statute which is not or cannot be enforced. Obviously, the laws with respect to possession and use of marihuana are more honored in the breach than in the observance."

Of the majority who did not favor the trend to limit or preclude incarceration, many thought that doing so would interfere with what otherwise would be the wide discretion of courts and prosecutors. Under the present system, these judicial officials can impose broader penalties against known sellers whom the police have arrested for possession. Others thought that stricter more uniform penalties were required if marihuana use was to be eradicated. For example:

"As long as we have criminal sanctions against possession and sale of marihuana, the courts must become more penalty conscious and certainly more consistent. There should be mandatory incarceration. . . . Fines mean nothing to young people because money is too readily available. Probation *to them* means they must be more careful. The "lock-up" is something quite different. . . ."

On the other hand, almost 20% more than the 47.7% responding that they favored this trend (65.5%) stated that they favored the current tendency among state and federal legislators to reduce penalties for possession and to maintain heavy penalties for sale. This finding is somewhat ambiguous in that some prosecutors responded that they did not favor the tendency because they thought that penalties for sale were too harsh and

¹¹ Nonetheless, only 47.7% favored the trend precluding or limiting incarceration for first offenders.

¹² Indeed, only 14.7% favored the adoption of such a scheme.

should be reduced as well. As one prosecutor suggested:

"Relatively heavier penalties for sale are agreeable—however, 'sales' include most transfers [so] there ought to be a petty, or misdemeanor marihuana sales offense to coincide with a violation level possessory offense."

Others disagreed with this tendency because they felt the increase in use indicated a need for stricter penalties. The response to this question more than likely understates the number of prosecutors who favor reduced penalties. However, the reason more prosecutors favor this alternative than the trend limiting incarceration appears to be that it expressly approves heavy penalties for sale.

Opinions With Respect to New Alternatives for Marihuana Control. The survey was next directed to discerning the attitudes of prosecutors toward two models for controlling marihuana use which might be proposed for future implementation. The first of these is a more restrictive, the second a less restrictive model.

Prosecutors were asked whether they would favor a scheme of control which would decriminalize marihuana use by replacing the present penalties with petty violations similar to traffic tickets. Only 14.7% of prosecutors thought that the use of moderate amounts of marihuana should be handled by such a scheme. 60.3% thought that such a scheme would substantially inhibit their ability to enforce the laws against sale. 76.5% were certain that if such a scheme were instituted the use of marihuana would increase.

More than one-third of those who believed that a petty violation scheme consistently applied would be a better deterrent than criminal penalties sporadically applied thought that use would increase under such a scheme. Why so many prosecutors expected this increase to occur is not clear.

Some possible reasons are their occupational respect for the criminal law as a symbol of social disapproval, their belief that a violation scheme could not be consistently or rigorously enforced, their disapproval of schemes calling for new facilities to implement them, or their understanding that any reduction in penalties would signify moderate approval rather than disapproval of use.

District Attorneys were next asked their opinions on legalization of marihuana, supported by a regulatory scheme, such as taxation and quality control. Although many prosecutors were of the opinion that the existing criminal laws do not significantly deter use, especially among segments of the population predisposed to try marihuana, only 11.2% favored outright legalization of the drug, 86.4% positively opposed such an approach and 2.4% were uncertain.

Those prosecutors who elaborated on their views toward legalization gave various reasons. Some thought that marihuana could be better controlled if legalized and regulated, some feared the appearance of organized crime on the selling scene, some thought violent crime deserved more attention than the prohibition of unsavory practices, some advocated more attention to hard drugs and less to marihuana, and some thought that no problem could be worse than alcohol and that it was a misplacement of priorities to be so concerned with marihuana.

One prosecutor put his recommendation for legalization in these words:

"The question which continually is asked in 'rap' sessions with [young people] is 'how can you say that pot is any worse than alcohol.' To me, this is a question which defies an answer. I therefore advocate the legalization of marihuana and hashish for all persons over 18 years of age. I feel that to do otherwise is extremely hypocritical in light of my personal belief that the use of these substances:

- (a) is not addictive;
- (b) is no more physically harmful than alcohol;
- (c) does not cause aggressive or anti-social conduct in the great majority of users (in contrast to alcohol which does).

... Penal sanctions should be retained for the operation of motor vehicles while under the influence of drugs."

Another prosecutor even offered a complete scheme for regulatory control. A third said: "The real issue of the 70's is not the legalization of marihuana, which is *de facto* legal in major urban areas, but facing the hard questions of heroin and of other highly addictive drugs."

Those who disapproved of legalization, though relatively silent as a group, thought that legalization would merely burden society with the misusers of another social drug. For example,

"Do not legalize the possession or use of marihuana—the fact that alcohol, the adult counterpart as youth would have us believe, is legal does not obviate . . . 6 million alcoholics—let's not compound an already epidemic problem."

and

"To say that marihuana is no worse than alcohol is to say that two evils are better than one."

There is some indication in the comments of those who do not presently favor legalization that they might reverse themselves if adequate provision could be made to control driving under the influence. As one prosecuting attorney remarked:

"While I personally feel that the penalty for possession of marihuana first offense is too great . . . I nevertheless have a reservation about decriminalizing or destigmatizing the use of marihuana. I don't believe we have sufficient knowledge concerning the effects of the use of marihuana upon the user's reaction time . . . If marihuana has an effect similar to that of alcohol, then

I believe the present sanctions should be maintained. I am impressed . . . that our traffic patrolmen stop very few vehicles in which they discover marihuana was being used. I can't help but feel that the sanctions have the effect of driving the use of marihuana 'underground' although perhaps they don't completely deter its use. I am not concerned, either as a prosecutor or as a private citizen, with what people do in their homes; I am, however, with what they do on the highways."

In evaluating the actual import of these findings one must keep in mind that almost one-half of all prosecutors thought that the scientific evidence on the effects of marihuana use was not complete. A number of these suggested they would willingly modify their present support of existing law in light of the results of that evidence.

14.7% of prosecutors favor decriminalization of the use of marihuana augmented by a petty violation scheme¹³ and 11.2% favor legalization, but only 60% of those who favor legalization also favor decriminalization of use. This means that almost half of the prosecutors favoring either model are not the same, and more importantly that 20% of the total sample favors one of these two models for change.

The results of the entire survey should be viewed in light of the fact that prosecutors are elected officials, and that the sample of opinions collected was predominantly rural. In this regard, 88% of the prosecutors responding reported that public opinion in their jurisdictions supported the existing marihuana laws, only 8.7% thought that their jurisdiction would favor the decriminalization of use, and 3.7% outright legalization. With these estimates of public opinion in mind it would seem that many of the prosecutors responding to this survey have advocated ideas which have not yet received support in their constituencies. Indeed, almost one-half of the prosecutors reported that in their view public opinion would support an increase in the marihuana penalties, rather than a reduction. Even though this survey was anonymous, it would be naive to assume that what an elected official believes to be the preponderance of public opinion would be totally discounted in his determination of his own opinion on the matter. Therefore, prosecutors may have responded more

¹³ It should be noted that these prosecutors were not given the opportunity to select a method of control which decriminalized use but did not utilize a petty violation scheme. It is not clear how this omission affected the results of the survey if it affected them at all.

It should also be noted that the questionnaire did not ask those prosecutors who did not favor abandonment of existing law which course they would prefer if the laws were in fact to be abandoned.

conservatively than they would have if they thought public opinion could be entirely ignored. Finally, one philosophical view of the law is that it should follow rather than lead public opinion. It is possible that prosecutors as a group espouse this view.

INTERPRETATION¹⁴

I. Introduction

This survey was designed to shed light on how District Attorney's attitudes are related to both their enforcement policies and their opinions of what the law should be. It was suspected that questioning of the traditional view that marihuana is harmful would coincide with disapproval of the present law, willingness to reform it, and lenient enforcement policies while the law itself remained unchanged. Conversely, it was supposed that acceptance of this traditional view and belief that the present laws are effective would correlate with strict enforcement policies and an unwillingness to adopt reforms.

Similarly, it was suspected that prosecutors who were inclined to use broad discretion and who demonstrated a readiness to reform the existing marihuana laws would represent the highly populated urban centers of the Northeast and West where marihuana smoking is most prevalent. On the other hand, it was thought that prosecutors from the rural South where marihuana use is relatively rare would be more punitive, and that the intermediate opinions and policies would be represented by prosecutors from other regions of the country.

In evaluating these two theories, an interpretation of the relationships between responses in each section of the questionnaire was undertaken. First examined were the attitudes concerning marihuana upon which particular opinions and policies are founded.

II. Attitudes Concerning Marihuana Use and the Existing Marihuana Laws

Attitudes Toward Effects on Users. Of those prosecutors who reject the traditional view that

¹⁴ The division of the sample for purposes of comparison into portions expressing different views on the marihuana laws resulted in some cells including less than 10% of the total number of prosecutors responding. Therefore, a statistical analysis using correlation coefficients has not been made because the results of such an analysis would most likely be misleading.

marihuana leads to hard drug use,¹⁵ 84.9% support a reduction of penalties, 73.5% favor preclusion or limitation of incarceration for first offenders, 42.4% believe that possession of moderate amounts for personal use should be decriminalized, and 36% favor legalization. In contrast, among those who accept this view, only 62.5% favor any penalty reduction, 41.4% the limitation of incarceration, 7.1% decriminalization and 4.8% legalization.

Prosecutors who do not believe that marihuana leads to hard drug use or has other pernicious effects advocate more lenient methods for the control of its use than do those who believe it does. Indeed, more than a third of these prosecutors would legalize marihuana outright. In comparison, among those prosecutors who believe that marihuana use does in fact lead to hard drug use, twice as many would not support any change whatever in the law, and six times as many would be unwilling to adopt a major reform.

The same relationship occurs between those prosecutors who reject the view that marihuana leads to aggressive behavior¹⁶ and those who are willing to modify the existing marihuana statutes. Of those who reject the aggression hypothesis, 70.2% would reduce penalties, 53.2% limit incarceration, 21.4% decriminalize use, and 17.6% legalize altogether. In contrast, among those who believe that marihuana leads to aggression, only 61% would still favor reducing penalties, 40% minimize incarceration, 8.3% decriminalize possession and 3% legalize the drug.

The relationship between willingness to reform the law and disbelief in the harmful effects of marihuana use is somewhat less dramatic here

¹⁵ If the survey question on this subject had been worded a little differently it is likely that the differences in opinion would have been even greater. The question asked was, does marihuana "lead to" hard drug use. Many District Attorneys do not believe that marihuana users develop a physical dependence on drug-induced highs which causes them to seek stronger drugs for its satisfaction. It was their considered opinion, however, that under our present system of legal control, marihuana users were likely both to have access to hard drugs and to be tempted to try them. They also agreed that users may develop a psychological dependence upon drug-induced intoxication. Had the question been, does marihuana use "cause" hard drug use, the more sophisticated exponents of an association between the two not equivalent to causation would presumably have responded in the negative.

¹⁶ Again, had the questionnaire asked, does marihuana lead to "violent behavior" or "crime", rather than merely aggressive behavior, the differences in opinion would have been greater. As other investigations into patterns of marihuana use indicate, under certain circumstances, some marihuana users may resist arrest. This would be aggressive conduct but not the type of violent behavior historically associated with marihuana's use.

than with respect to the belief that use leads to hard drugs.

There is a clear division in opinion on appropriate legal reform between prosecutors who consider marihuana a relatively benign drug and those who view it as socially and physically harmful. More than one-half of the prosecutors who doubt the harmful nature of marihuana support a major change in the present laws controlling its use. This percentage is more than twice that of prosecutors on the average who would be willing to make a major change.

Attitudes Toward the Increase in the Use of Marihuana. The questionnaire asked whether the current increase in marihuana use was primarily the result of its acceptance as a social drug (such as alcohol), part of a social trend to tolerate all forms of drug use or a byproduct of either the youth subculture or the youth protest movement. In analyzing which prosecutors took which view, the most interesting result was that 70% of those who favored legalization of marihuana did not necessarily associate use with youth. This is 30% more than the portion of prosecutors in our general findings who reject this association. No similar difference in attitude exists among prosecutors who do or do not favor decriminalization or other lesser changes in the existing laws.¹⁷

The reason a prosecutor would be most likely to give for the increase in marihuana use does not seem to affect his prosecution policies, with one exception. In comparison with the general findings, 14% more of the prosecutors who do not think that marihuana use is confined to any particular age group also said that the youth of the offender involved was their primary reason for avoiding prosecution of any case. Although lenient prosecution policies do not seem to relate to any one attitude about the increase in marihuana use, it is not surprising that prosecutors who are willing to forego prosecution of young in preference to older offenders do not view marihuana as symbolic of the disagreement between generations.

Finally, no more than 3% (even of those who viewed its use as a form of protest) thought that

¹⁷ Indeed, there is one problem with the supposition that these prosecutors would differ markedly from those who did not so attribute the increase in marihuana use. Although marihuana is socially accepted to some degree, this acceptance does not appear throughout the population with the same visibility that it is found among the young. Therefore, prosecutors who were not particularly disturbed by the increasing use of marihuana might nonetheless be inclined to associate the increase with the younger generation.

decriminalization would discourage use, and 24% (the same percentage as in the general findings) thought that the number of users would remain about the same. Moreover, whatever explanation a prosecutor offered for the increase in marihuana use, he did not think that existing laws deterred the under-thirty generation.

Opinions About the Deterrent Value of Existing Law. This survey indicates that very few prosecutors think existing law deters those persons most disposed to use marihuana. It was suspected that the prosecutors who believe that the law is an effective deterrent would oppose any change and would enforce it strictly.

Four times as many prosecutors who gave lack of evidence as the principal or the only reason for their decisions not to prosecute thought that the law significantly deterred persons under 30 from marihuana use as did those who gave other reasons such as age or amount possessed. Thus prosecutors who believe that the law works are less likely to use their discretion to change its effects than those who do not.

The fact that prosecutors are willing to offer informal probation as a condition of non-prosecution correlates with the belief that fear of imprisonment is not the primary reason why persons refrain from use. 74% of the prosecutors who doubt the deterrent value of incarceration use informal probation. Among those who believe incarceration is the most effective deterrent to use, only one-fourth would exercise their prosecutorial discretion in this manner.

Most of those prosecutors who believe that punishment deters marihuana use approve of and adhere strictly to present law. Among the majority of prosecutors who believe that marihuana use is not deterred by the threat of punishment, a large number (almost three-fourths) make broad use of their discretion to modify the punitive effect of the law.

Prosecutors who believe that the law does not deter or only minimally deters persons under 30 appear more willing to make major modifications than those who believe that the law is a significant deterrent to this group. Many prosecutors also take the position that the law is at best a moderate deterrent to use. These prosecutors favor the present legal trend and oppose drastic change.

The more polarized prosecutors are the most decisive. Among those who think the law provides no deterrent whatever to use, 65.1% favor limiting incarceration, 30% favor decriminalization, and 26.7% favor legalization. In contrast, of those who believe the law deters significantly, only 35.2% favor limiting incarceration, 11.7% decriminali-

zation, and 3.9% legalization. Whereas prosecutors who view the law as a significant deterrent are more reluctant than the average prosecutor to follow the present trend toward change, almost half of those who think the law does not work are ready now to abandon this trend entirely in favor of new alternatives.

Almost one-half of the prosecutors who thought that the threat of incarceration failed in its objective supported the adoption of a petty violation scheme to discourage marihuana use. Logically, very few prosecutors who approved of incarceration for marihuana offenders favored such a scheme.

Most prosecutors, regardless of whether they thought present law was effective or not, agreed that, as a practical matter, marihuana use would increase if possession were permitted. As expected, more of those prosecutors who thought the present law was a valuable deterrent feared such an increase. Even so, many prosecutors who did not think the existing laws impeded the smoking of marihuana nonetheless thought smoking would increase if use were decriminalized. These prosecutors appear to believe that making the law more lenient would signify a change in society's attitude toward marihuana which would actually encourage, not discourage, use.

After observing how the willingness to adopt reform is related to attitudes about marihuana and existing law, analysis was then made of the same question from another viewpoint. What other opinions about marihuana were common to prosecutors who favored some reform as opposed to those who did not favor revising the present scheme for its legal control?

Attitudes Toward Changing the Laws

District Attorneys were asked what changes should be made in the existing legal scheme for controlling marihuana use. Four possible models for control were set forth. The first two models (reduced penalties for possession and limiting incarceration of first offenders) involved only minor change. These models, which incorporate the types of change now being implemented by the states, continue marihuana use as a crime. The second two models (decriminalization of use and legalization) involved major change. These models eliminated the criminal law aspects with respect to use.

The survey findings show that approximately 20% of prosecutors favored one of the two models involving major changes in the law and that about 24% favored no change, including the changes presently being made in most jurisdictions.

Most prosecutors (more than one-half), however, took the intermediate position on changing the law. They thought the consequences of use should be less far-reaching, but that the criminal system should not relinquish control over marihuana. These prosecutors were in accord with the trend, but unwilling to try non-criminal modes of discouraging use.

The relationship between the degree of change desired and other attitudes toward the drug was of particular interest. For example, the greater the change favored, the more skeptical was the prosecutor as to whether the traditional view of marihuana had any basis in fact. Fewer of the prosecutors who favored legalization thought that marihuana either led to hard drug use or caused aggression than of those who did not. Additionally, the more marked the favored change, the less impressed were the prosecutors favoring that change with the ability of the existing law to achieve its objectives.

The chart below sets forth the relationships between different opinions of the law and views of both the harms of marihuana and the ability of existing law to deter its use.

Of interest were the attitudes of attorneys favoring decriminalization of possession which do not appear on the comparative chart. First, the

overwhelming majority (65%) of those who favored decriminalization believed that a petty violation consistently applied is as effective a deterrent as the threat of incarceration sporadically applied; whereas, the majority of those who disagreed with decriminalization thought a violation scheme would deter less. Second, 71.4% of those who favored decriminalization thought if this course were adopted, the number of users and amount of use would not increase; whereas, only 12% of those who did not favor this course thought that the scope of the marihuana problem would not change for the worse and 86% that it definitely would. Third, 74.8% of those favoring this view said decriminalization of possession would have a minimal effect, if any, on their ability to prosecute persons for sale; whereas, 86.7% of those who disagreed thought it would substantially impair enforcement of the laws against sale. Belief that decriminalization of possession would not change the size or the nature of the existing marihuana problem is clearly the foundation of prosecutorial opinion favoring this type of legal reform.

In sum the operating hypotheses are confirmed. Prosecutors who consider the present law an ineffective scheme for control of marihuana and who reject the traditional views about its effects favor

Correlates of Opinions About Legal Reform

	Preferred Model for Control	Opinions About Effects of Use		Respect for Present Law
		Leads to Hard Drug Use	Leads to Aggression	Present Laws Do Not Deter Only Minimally Deter Under 30 Use
No Change	No Change	87.08%	47%	51.3%
Minor Changes	Reduction of Penalties * for Possession	68.8%	35.05%	63.2%
	Limitation or Preclusion * of Incarceration	64.7%	32.9%	59%
Major Changes	Decriminalization of Small Amounts for Personal Use	41.5%	21.85%	67.2%
	Legalization	32.2%	11.11%	69%

* Should be considered as roughly equivalent changes in the law.

major changes in the law. Those who are more concerned about the drug's effects and more impressed with the ability of current law to contain its use are not ready to adopt new schemes of control.

Next an attempt was made to determine how different enforcement policies are related to opinions about reforming the law.

Prosecution Policy

Prosecutors who believe the present marihuana laws do not accomplish their deterrent objective are more likely to employ broad prosecutorial discretion in marihuana cases than prosecutors who hold the opposite view. The attitude of attorneys toward the reasons for use does not definably affect prosecutors' enforcement policies, however, except

for their willingness to release youthful offenders. Of concern at this stage of the inquiry is the extent to which lenient prosecution policies coincide with prosecutors' opinions on what the law should be.

Examination of the chart below shows that the willingness of prosecutors to modify existing law by employing lenient enforcement policies, such as refusing to prosecute small amount cases, is only partially reflected in their willingness to actually reform the law.

Fewer prosecutors who favor no change in the law employ lenient enforcement policies than those who favor any change at all, either major or minor. Many more prosecutors who favor legalizing use resort to the technique of offering informal probation than do prosecutors who like the law as it

Correlates of Opinions About Reforming the Law

		Prosecution Policy	
	Reform Advocated	Age or Small Amount Most Important Factors In Decisions Not to Prosecute	Use Made of Informal Probation
Minor Change	No Change	12.6%	28.5%
	Reduce Penalties for Use or	33.3%	34.3%
	Limit or Preclude Incarceration	23%	33.2%
	Decriminalize Possession	26.9%	37.4%
Major Change	Legalize	33.3%	37.8%

stands. Otherwise, the relation between readiness to change the law and lenient prosecution policies is very slight.

This suggests that prosecution policy is related to some other variable. For example, the use of one lenient policy might correlate with use of another.

Under this theory, prosecutors who were willing to withhold prosecution because of the age of the offender or the small amount of marihuana involved, would likewise make some use of informal probation as a technique for withholding prosecution, little or no use of offenses ancillary to the basic laws governing possession and sale, and narrow use of the constructive possession fiction. On the other hand, prosecutors who only withheld prosecution for lack of evidence would not use probation and would find the ancillary offenses and constructive possession rule invaluable aids in securing convictions.

In fact, 58.4% of those prosecutors who make use of informal probation favor the present judicial and legislative tendency to limit or preclude incarceration for first offenders. This attitude is almost 30% more prevalent than among prosecutors overall. The use of this technique does not necessarily mean that its users are against incarceration of marihuana offenders in general. What its use seems to indicate, in addition to a reluctance to incarcerate, is the belief that prosecutors should have open to them a wide variety of alternative procedures and sanctions, among them incarceration, so as to make the punishment fit the offender as well as the offense.

This analysis of the responses suggests that a prosecutor's view of his role is at least as important as his view of the law in determining his policies. This explanation is supported by other relationships observed between various prosecutorial policies.

In the general findings, 29.2% of prosecutors reported that they had used the technique of informal probation. Forty-one percent of those who said age was the most important factor in their decisions not to prosecute, 51.1% of those who said lack of record was most influential, and 51.1% of those who found personal attitude most significant, used the technique of informal probation as a condition of non-prosecution.¹⁸

¹⁸ Only 30% of those prosecutors who thought that the amount of marihuana seized was the most relevant factor in making their determination not to prosecute, used probation as a condition for withholding prosecution. Theoretically, these prosecutors exhibit a lenient attitude toward the use of marihuana. Yet, among them, no more than the average number use the technique in question to minimize the effects of criminal law for marihuana

Prosecutors who did not use ancillary offenses such as "being in a place with knowledge of drug use," or made only limited use of constructive possession, did not turn out to be otherwise lenient in their prosecution policies toward marihuana. Slightly more of the prosecutors who reported they did not use these laws used informal probation as a condition of non-prosecution than did those who made frequent use of such laws. Moreover, an equal percentage of those who would use constructive possession to prosecute everyone in a group arrest situation and those who would prosecute no one in such a case, used the technique. Therefore, whether or not a prosecutor makes broad or narrow use of constructive possession is not associated with the likelihood that he will use broad discretion in other areas.

The survey results show that use of informal probation is a function of belief in wide prosecutorial discretion, whereas use or non-use of certain offenses or legal fictions is a function of belief in the offense or the fiction itself.

In addition to determining how prosecutors' attitudes correlated with their policies the Commission was interested in discovering what characteristics were common to jurisdictions in which lenient attitudes are represented and how these differ from the jurisdictions in which the strict view prevails.

Jurisdictional Characteristics

Attitudes by Population. 1. Use of Prosecutorial Discretion. The following chart indicates by jurisdiction size, where frequent (+) and infrequent (-) use is made of a particular factor in decisions not to prosecute.

Understanding that the picture is not one of neatly escalating percentages, it appears that prosecutors from jurisdictions with larger populations are indeed more likely to weigh factors such as age and amount of marihuana possessed in deciding not to prosecute than are those from more sparsely populated jurisdictions. The chart illustrates a similar relationship between number of prosecutors who use probation as a condition of non-prosecution and population size. Prosecutors from large jurisdictions are more likely to use this technique than those from small ones.

The relatively strict policies of prosecutors from jurisdictions between 100,000 and 250,000 in size

offenders. There is one possible explanation for this observation. Fewer of these prosecutors would need probation to achieve the desired result in marihuana cases. Such a prosecutor would either find the amount of marihuana possessed so small that no legal action was indicated or would consider it large enough to imply intent to transfer.

Use of Prosecutorial Discretion

Population Size	Age	Lack of Record	Amount of Marihuana	Personal Situation	Lack of Evidence	Use of Informal Probation
0 - 10,000	- 1/ + 2/	- 1/ + 2/	- 1/ + 2/	- 2/ + 3/	+	
10,000 - 20,000					+	
20,000 - 50,000					+	+ 3/ + 4/
50,000 - 100,000		- 3/ + 2/			+	
100,000 - 250,000	- 1/ + 1/	- 2/ + 1/	- 2/ + 2/	- 1/ + 1/	+	
250,000 - 500,000		+ 2/ + 3/	+ 1/ + 3/	+ 2/ + 3/	+	+ 2/ + 1/
500,000 - 1,000,000						
1,000,000	+ 3/					
			LEGEND			
	+ = over 40% - = under 20%	+ = over 40% - = under 20%	+ = over 40% - = under 20%	+ = over 30% - = under 20%	+ = over 40%	+ = over 35% - = under 20%

1/ = order of % from greater to lesser

are particularly interesting. In every case these prosecutors made less use of their discretion not to prosecute than did those from smaller jurisdictions.

2. *Attitudes Toward Change in the Laws.* The relationship between prosecutors' willingness to change the law and population size is charted below.

No clear pattern whatever emerges. However, prosecutors from jurisdictions of 100,000 to 250,000 are less willing to adopt reforms than those in other jurisdictions. This chart suggests that insofar as populations with large jurisdictions in the sample modify the force of the law by their prosecution policies, they do so as much because of the size of their caseload as because of any attitude that the existing law is wrong.

3. *Use of Ancillary Offenses.* There was an expectation that among jurisdictions having ancillary offenses, more lenient prosecutors would not prosecute persons for acts such as being in a place where drugs are used with knowledge. It was assumed that the prosecutors who were inclined to use such laws would represent small rather than large populations.

In view of the above chart it seems that it is the larger jurisdictions which more frequently resort to the ancillary offenses, not the smaller ones. This may not be the result of any particular attitude toward the law but instead a reflection of the larger caseloads in large jurisdictions which encourage prosecutors to prosecute under the laws which require the least investigation and proof.

Therefore, although the highly populated jurisdictions are in fact more lenient, it seems that theirs is more a leniency of necessity than one of design.¹⁹ That is, although prosecution policy seemed to be a function of population, opinions toward change in the law did not.

Attitudes by Region. If attitudes are not necessarily related to population, might they be related to region? The following charts show by state and region whether the percentage of prosecutors who make use of probation, report the customary use of fines and probation in marijuana cases, and believe in the limitation of incarceration, decriminalization and legalization, is above (+) or below (-) average.

According to these charts, the most lenient jurisdictions are located in the Northeastern and

Midwestern States. As expected, the strictest jurisdictions are in the South. The Western, Middle-Atlantic and Southwestern states fall somewhere in the middle. The actual pattern is almost the same as the expected pattern, with the exception that it was not expected that the Midwestern states would be more lenient than those located in the West.

Any comparison of prosecution opinion by region is complicated by the necessity of defining the different regions. Under a strict geographical approach, such as the one used in this survey, certain problems arise. Most importantly, certain states do not seem to fit within their region.

For example, Florida and California are likely to espouse a middle position in any opinion survey because of the bifurcation of opinion between their northern and southern sectors. Whereas in most regions the population distribution is fairly even, in the West certain states represent very large populations and others extremely small ones. Further, two states, Alaska and Hawaii, do not seem to fit well within their geographical region because they are not part of the Continental United States. Finally, the results from Utah, Nevada, and New Mexico are anomalous: Utah because of the religious orientation of the predominant portion of the population, Nevada because it tends to legalize pleasurable vices, and New Mexico, because it is situated on the border of Mexico at a point where there is a lot of drug traffic.

With few exceptions, the number of prosecutors favoring any particular practice or reform of the law in each state paralleled the survey findings about the number of prosecutors who did so in general. That is, in almost every state, more prosecutors said that first offenders were punished only by the imposition of fines or probation than approved the use of informal probation as a technique for withholding prosecution. Also, in almost every state, more prosecutors favored limiting incarceration than decriminalizing possession and more favored decriminalization than legalization of use.

However, the exceptions are of particular interest. In four states a larger number of prosecutors used informal probation than favored limiting incarceration. These states are Oklahoma, Alaska, Colorado, and Louisiana. With the exception of Colorado, each of these states is far below the average in terms of actually rendering lenient sentences to first offenders.

Although in most states fewer jurisdictions favor legalization than decriminalization of marijuana, in some a different pattern occurs. Not counting those states in which no responses favor

¹⁹ It is well to remember at this juncture that the responses to the questionnaire were skewed in favor of small jurisdictions. Moreover, no responses were received from some of the largest jurisdictions—Chicago, San Francisco, Los Angeles, etc., and the response of New York County arrived too late to be included in the survey's statistical tabulation.

Opinions on Change in Marihuana Laws by Population

Population Size	Agree with Trend to Limit or Preclude Incarceration	Agree with Reduced Penalties for Possession of Small Amounts *	Favor Decriminalizing Use	Favor Legalization
0 - 10, 000	0 $\frac{1}{-}$	0 $\frac{2}{-}$	0 $\frac{2}{-}$	+ $\frac{1}{-}$
10, 000 - 20, 000	0 $\frac{2}{-}$	+ $\frac{2}{-}$	0 $\frac{3}{-}$	0 $\frac{1}{-}$
20, 000 - 50, 000	- $\frac{3}{-}$	+ $\frac{3}{-}$	0 $\frac{4}{-}$	0 $\frac{2}{-}$
50, 000 - 100, 000	- $\frac{2}{-}$	+ $\frac{5}{-}$	- $\frac{1}{-}$	- $\frac{3}{-}$
150, 000 - 250, 000	- $\frac{1}{-}$	+ $\frac{6}{-}$	- $\frac{2}{-}$	- $\frac{2}{-}$
250, 000 - 500, 000	0 $\frac{2}{-}$	+ $\frac{4}{-}$	0 $\frac{1}{-}$	- $\frac{4}{-}$
500, 000 - 1, 000, 000	+ $\frac{1}{-}$	+ $\frac{1}{-}$	+ $\frac{1}{-}$	- $\frac{1}{-}$
1, 000, 000 +	+ $\frac{1}{-}$	0 $\frac{1}{-}$	- $\frac{3}{-}$	0 $\frac{3}{-}$
	+ = over 60% - = under 50% 0 = between 50-60% $\frac{1}{-}$ = order of percentage	+ = over 60% - = under 50% 0 = between 50-60%	+ = over 20% - = under 15% 0 = between 15-20%	+ = over 20% - = under 10% 0 = between 10-20%

* Question added "And Favor Increased Penalties for Sale." The most lenient prosecutors would be likely to disagree because they also favored reduced penalties for sale.

Use Offense

Population Size	Have Such Offense	Use Offense
0 - 10,000 10,000 - 25,000 25,000 - 50,000 50,000 - 100,000 100,000 - 250,000 250,000 - 500,000 500,000 - 1,000,000 1,000 - +	$\frac{4}{0}$ $\frac{3}{0}$ $\frac{5}{0}$ $\frac{6}{0}$ $\frac{6}{0}$ $\frac{1}{0}$ $--$ $\frac{1}{0}$ $\frac{1}{0}$ $\frac{1}{+}$	$\frac{2}{--}$ $\frac{3}{0}$ $\frac{1}{0}$ $--$ $\frac{1}{0}$ $\frac{1}{0}$ $\frac{2}{0}$ $\frac{2}{0}$ $\frac{2}{+}$ $\frac{1}{+}$
	† = over 40% - = under 20% 0 = between 20-40%	+ = over 25% - = under 15% 0 = between 15-25%

NORTHEASTERN REGION

State	POLICY			OPINION		
	Use of Probation	Fines Customary Sanction	Limit Incarceration	Decriminalize Possession	Legalize Use	
New England:						
Maine	* / 0	+	+	1 / +		+
Massachusetts	+	+	1 / 100%	+		9 / +
Rhode Island	+	5 / +	2 / +	* / 0		+
Vermont	+	1 / 100%	-	* / 0		1 / +
New Hampshire	* / -	100%	-	* / 0		* / 0
N. Y. Metro Area						
New York	+	+	+	2 / +		+
New Jersey	-	+	7 / +	3 / +		* / 0
Connecticut	7 / +	+	3 / +	* / 0		* / 0

Legend for all charts:

- = below mean

+ = above mean

The means

Use of Probation

Fines Customary

Limit Incarceration

Decriminalize Possession

Legalize Use

1-10 = Top ten in order

* = Bottom 10

33.3%
73.2%
48.4%
12.6%
10%

MIDDLE ATLANTIC REGION

State	POLICY			OPINION		
	Use of Probation	Fines Customary Sanction	Limit Incarceration	Decriminalize Possession	Legalize Use	
West Virginia	5/ +	-	7/ +	+	+	+
Pennsylvania	-	+	+	+	7/ +	7/ +
Delaware	1/ 100%	1/ 100%	1/ 100%	-	*/ 0	*/ 0
Maryland	-	+	-	-	*/ 0	*/ 0
Ohio	*/ -	-	+	-	*/ 0	*/ 0

SOUTHERN REGION

State	POLICY			OPINION		
	Use of Probation	Fines Customary Sanction	Limit Incarceration	Decriminalize Possession	Legalize Use	
Virginia	-	* / -	* / -	-	-	-
Kentucky	-	-	-	-	-	-
Tennessee	* / -	* / -	-	* / 0	* / 0	-
North Carolina	* / -	-	* / -	* / 0	-	-
Mississippi	* / -	* / -	* / -	* / 0	* / 0	-
Alabama	-	-	-	* / 0	* / 0	-
South Carolina	3 / +	-	7 / +	* / 0	* / 0	-
Louisiana	2 / +	* / -	-	* / 0	+	-
Georgia	+	-	+	+	+	-
Arkansas	+	+	5 / +	+	+	-
South Special						
Florida	-	-	-	+	* / 0	-

MIDWESTERN REGION

POLICY		OPINION			
State	Use of Probation	Fines Customary Sanction	Incarceration	Decriminalize Possession	Legalize Use
Iowa	$\frac{6}{+}$	$\frac{2}{+}$	$\frac{6}{+}$	$\frac{5}{+}$	$\frac{4}{+}$
Michigan	+	+	+	$\frac{6}{+}$	$\frac{8}{+}$
Wisconsin	$\frac{7}{-}$	$\frac{3}{+}$	+	+	$\frac{5}{+}$
North Dakota	$\frac{*}{-}$	$\frac{5}{+}$	+	+	$\frac{9}{+}$
Missouri	$\frac{*}{-}$	+	+	+	+
South Dakota	+	-	+	+	$\frac{6}{+}$
Kansas	+	+	-	+	+
Minnesota	-	-	-	+	+
Nebraska	-	-	-	+	+
Illinois	-	-	-	-	-
Indiana	-	-	-	-	-

SOUTHWESTERN REGION

State	POLICY			OPINION		
	Use of Probation	Fines Customary Sanction	Limit Incarceration	Decriminalize Possession	Legalize Use	
Texas	+	4/ +	-	-	-	-
Oklahoma	7/ +	*/ -	-	*/ 0	*/ 0	*/ 0
New Mexico	5/ +	+	+	+	*/ 0	*/ 0
Arizona	-	-	-	*/ 0	*/ 0	*/ 0
Utah	7/ +	*/ -	-	*/ 0	*/ 0	*/ 0
Colorado	4/ +	4/ +	+	+	+	+

WESTERN REGION

State	POLICY			OPINION		
	Use of Probation	Fines Customary Sanction	Limit Incarceration	Decriminalize Possession	Legalize Use	
Washington	-	-	-	+	+	+
Oregon	-	-	-	+	+	+
California	-	+	-	-	-	-
Idaho	* / +	+	-	+	+	+
Montana	* / +	+	-	+	+	+
Wyoming	-	+	1 / 100%	+	+	+
Nevada	-	-	-	-	3 / +	+
Hawaii	7 / +	+	+	+	* / 0	0
Alaska	7 / +	-	-	-	-	-

either reform, equal percentages of prosecutors favor legalization and decriminalization in Arkansas, California, Maine, North Dakota, Pennsylvania, and Wisconsin. In seven states, more prosecutors favor legalization than decriminalization. These states are as follows: Idaho 30% to 20%, Louisiana 11.1% to 0; Nevada 28.6% to 0; North Carolina 6.7% to 0, South Dakota 23.1% to 15.4%, Vermont 60% to 0; and Wyoming 18.2% to 0. As in the survey findings, the jurisdictions favoring legalization are frequently not the same as those favoring decriminalization and vice versa. This suggests that a number of those prosecutors who think the marihuana laws should be reformed in some major way prefer one particular approach to the exclusion of any other.

CONCLUSIONS

Summary of Findings

I. Jurisdictional Characteristics

Although questionnaires were mailed to every District Attorney in the country, the response sample (45%) is overwhelmingly rural in character. 75% of the responding prosecutors represent populations of less than 100,000 persons. 89.1% characterized their jurisdiction as either primarily rural or mixed rural and urban. Every finding of this survey must be viewed in light of this finding, for all other data available indicates that the response to marihuana use is drastically different in urban jurisdictions in which the incidence of marihuana use as well as that of serious crime is higher than in rural jurisdictions.²⁰

II. Prosecution Policy

This survey suggests that the incidence of marihuana offenses is extremely high. It also suggests that in order to deal with the high incidence of marihuana offenses, many prosecutors must limit the number of cases they handle and that they do so by prosecuting selectively. Although prosecutors are a relatively passive force in *de jure* legal change, they are an active force in *de facto* legal change. The survey findings show that the effects of existing marihuana laws are modified by the exercise of prosecutorial discretion at every stage

²⁰ This is borne out in the interpretation of the relationship between responses. In comparing attitudes toward legal change against population size, more lenient attitudes occur in the larger jurisdictions which have larger caseloads. Also, jurisdictions between 100,000 and 250,000 in size are surprisingly strict in their approach to marihuana.

in the criminal process from arrest to conviction in the following ways:

At the Pre-Trial Level:

- (1) Almost 50% of prosecutors consider factors other than lack of evidence (such as the age of the offender or the amount of marihuana seized) in their decision not to prosecute.
- (2) 31% consider these other factors more important than lack of evidence. And, in 87.8% of those jurisdictions applying a "rule of thumb" as to the minimum amount of marihuana which must be found to sustain a conviction, this policy has been established entirely at the prosecutor's discretion.
- (3) At least 10% of prosecutors in jurisdictions which have a constructive possession rule never use it as an aid in prosecuting groups arrested in a vehicle or at a party.²¹
- (4) At least 68% of prosecutors do not use the constructive possession fiction to prosecute everyone arrested in the vicinity where marihuana is found. Whom they choose to exclude from prosecution and for what reasons is based on other discretionary factors.
- (5) More than two-thirds do not use ancillary offenses to prosecute marihuana offenders.
- (6) Less than 1/3 prosecute cases under laws such as those which make it a crime to be in a place where marihuana is used with knowledge.

At the Arrest Level:

50% of prosecutors reported that to their knowledge the police in their jurisdiction did not investigate marihuana traffic independent of hard drug traffic.

At the Disposition Level:

- (1) 79.1% of prosecutors play an active role in recommending disposition of the cases they bring.
- (2) More than one-fourth offer probation as a condition of nonprosecution.
- (3) Almost half of the prosecutors who make dispositional recommendations or offer probation are influenced in their decision to do so by the defendant's attitude.

III. A. Attitudes Toward the Effects of Marihuana Use

- (1) 50% said they could not enumerate the physiological and psychological effects of

²¹ In view of the fact that most marihuana arrests are group arrests this is a significant figure.

marihuana use because the effects are as yet unknown.

- (2) The traditional hypotheses that "marihuana leads to aggression" and "marihuana is a stepping-stone to hard drug use" are believed by approximately two-fifths and three-fourths of prosecutors respectively.
- (3) 40% of prosecutors think that the increase in marihuana use is due to acceptance of a new social drug, our drug-oriented culture, or some other reason not associated with the disagreements between generations.

B. Attitudes Toward the Deterrent Effect of the Marihuana Laws:

- (1) A majority of prosecutors agree that the existing marihuana laws do not deter people under 30 from initiating use, nor users from using regularly or from transferring small amounts for little or no consideration.²²
- (2) A majority also agree that to the extent the marihuana laws deter anything, what they deter is the use of marihuana in public, and to a lesser degree, persons over thirty from initiating use.
- (3) What findings (1) and (2) seem to mean is that the marihuana laws only deter those persons who would not use marihuana anyway, and the users themselves from getting caught.
- (4) The overwhelming majority responded that incarceration is not the principal deterrent to marihuana use. And, one-fourth said they did not believe that felony penalties were stronger deterrents as a general rule than misdemeanor penalties.
- (5) 37.7% said they thought that a petty violation (such as a parking ticket) applied consistently would deter as much or more than the threat of incarceration.

IV. Attitudes Toward Change in the Marihuana Laws

These attitudes must be evaluated in connection with the findings under Section III above.

- (1) At least 20% of prosecutors favor a major change in the existing laws, that is, either decriminalization of use or legalization. A significant number of additional prosecutors either said or implied they

would favor such change if and when "science" comes down clearly "for" marihuana.

With respect to lesser changes in the law, the findings are more ambiguous:

- (2) Although 58% of prosecutors did not think that incarceration was a primary deterrent to marihuana use and almost 75% indicated that it was now customary for first offenders to receive fines or probation in their jurisdictions, a smaller number, 47.7%, agreed with the current trend to limit or preclude incarceration for first offenders.
- (3) 65% said that they favored the tendency to reduce penalties for use and to maintain heavy penalties for sale. Even more may favor reduced penalties for use as some prosecutors disagreed with the tendency because they also favored reduced penalties for sale.

Summary of Interpretation

In studying the relationships among the survey findings, three fairly distinct profiles of representative prosecutors are highlighted. The first, typified by about 20% of all prosecutors, favors the removal of the offense of possession from the criminal system, either by decriminalizing the possession of small amounts for personal use or by legalizing the drug altogether. Prosecutors of this persuasion were unconvinced of the reputed dangers of marihuana use, were disenchanted with the existing law and were willing to use their discretion in accord with their beliefs in order to reduce the present criminal consequences of the possession offense. The typical prosecutor in this group would represent an urban area in the Northeast.

At the other extreme was the prosecutor, represented by slightly more than 20% of the sample, who was not only unwilling to make major changes in the law but also reluctant to follow the present trend to reduce penalties. Some of these prosecutors thought penalties should be increased. As a group these prosecutors were certain that marihuana was a noxious drug, that the law must protect society and the individuals who would use it from its dangers, and that the existing legal scheme is an effective means of achieving this protection. In their opinion, any defect in the present law was owed to the failure of law enforcement officials to enforce it strictly. For this reason, the enforcement policies of these prosecutors were calculated to punish rather than to excuse marihuana offenders. A prosecutor of this persuasion would

(Continued on page 841)

²² Most marihuana is distributed by means of such transfers.

ALL STATES

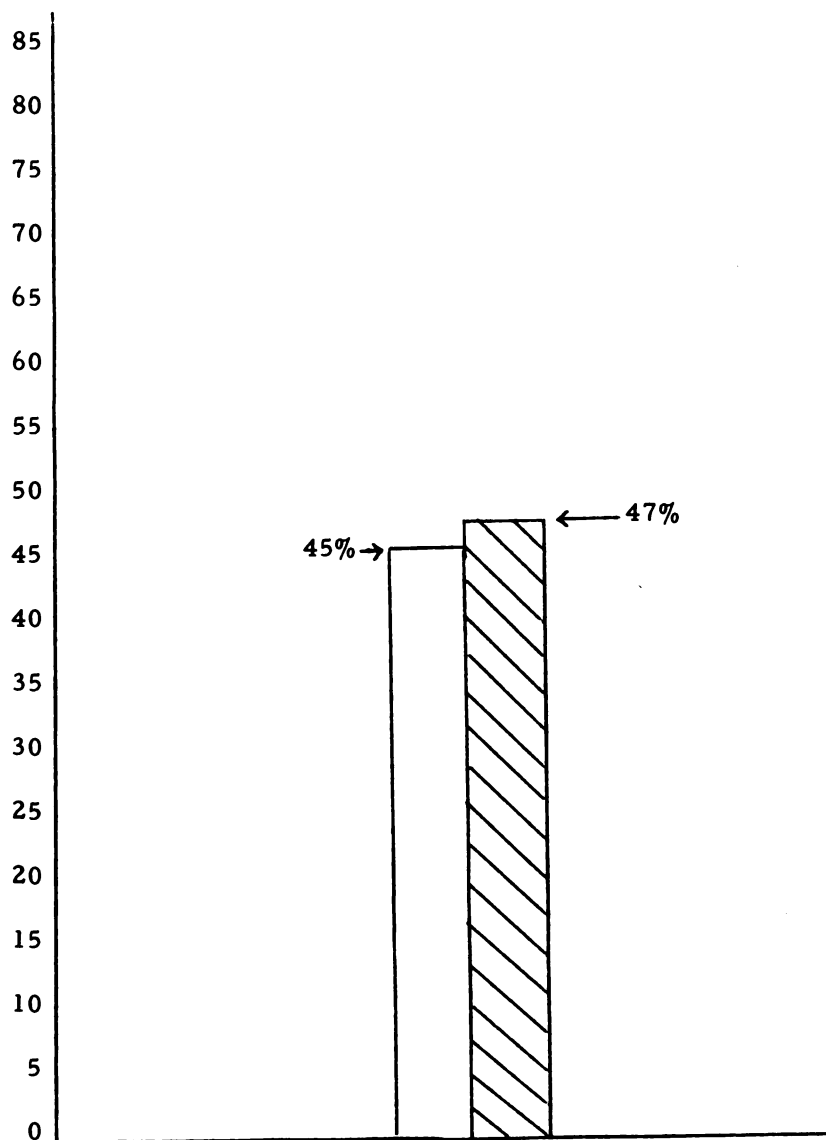
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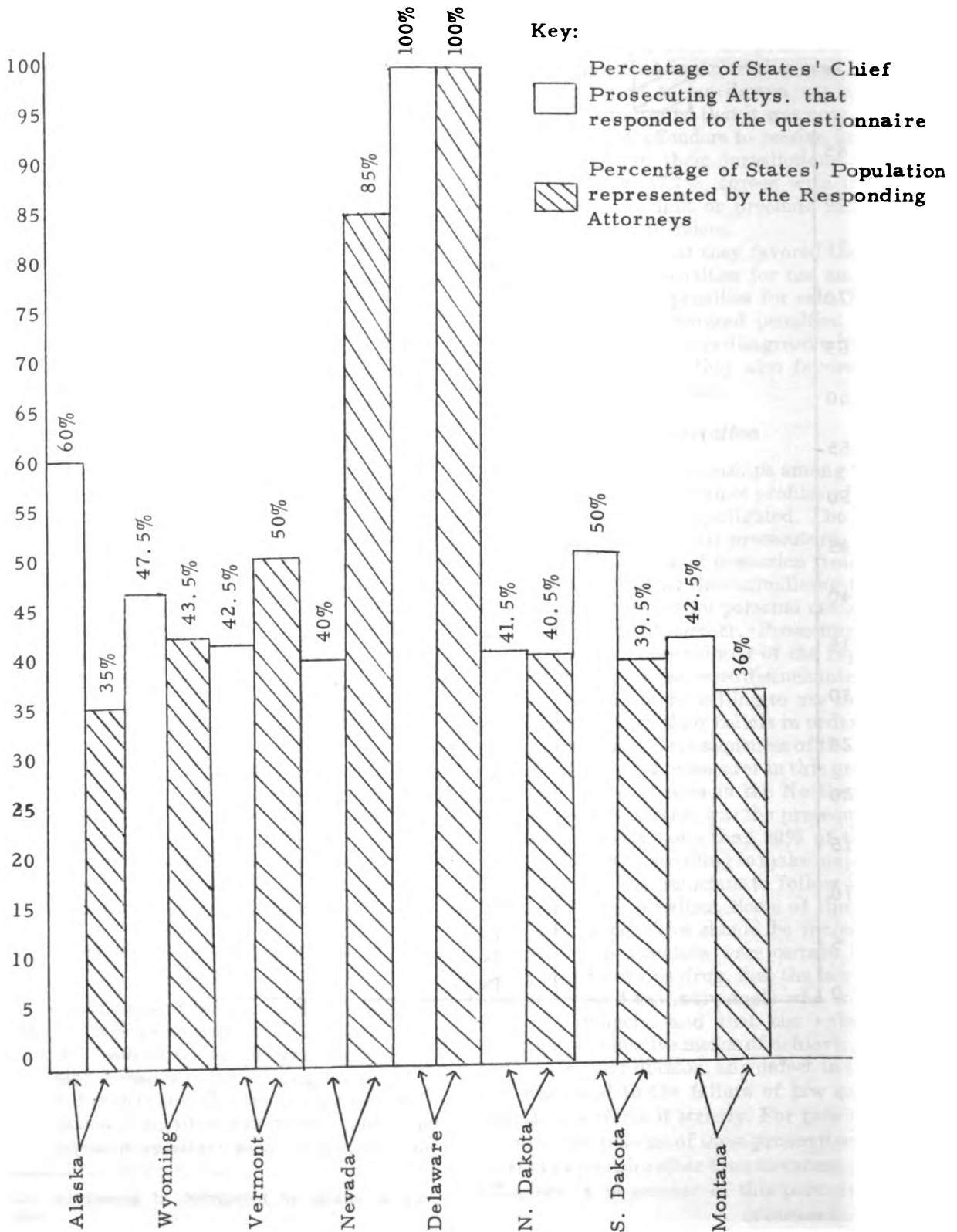
Total percentage of States' Chief Prosecuting Attorneys that responded to the questionnaire.



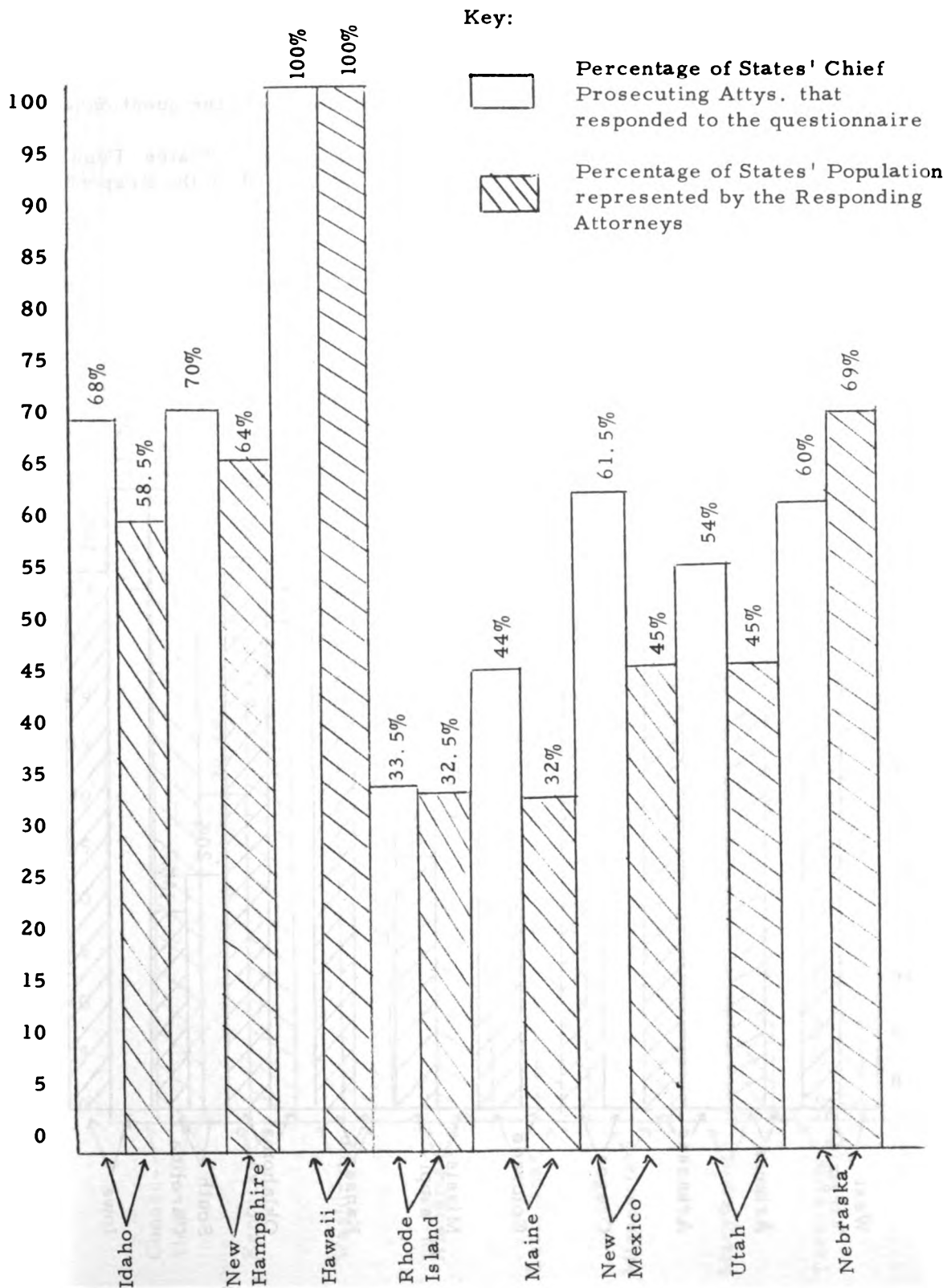
Total percentage of States' Populations represented by the responding Attorneys



STATE POPULATIONS UNDER 700,000



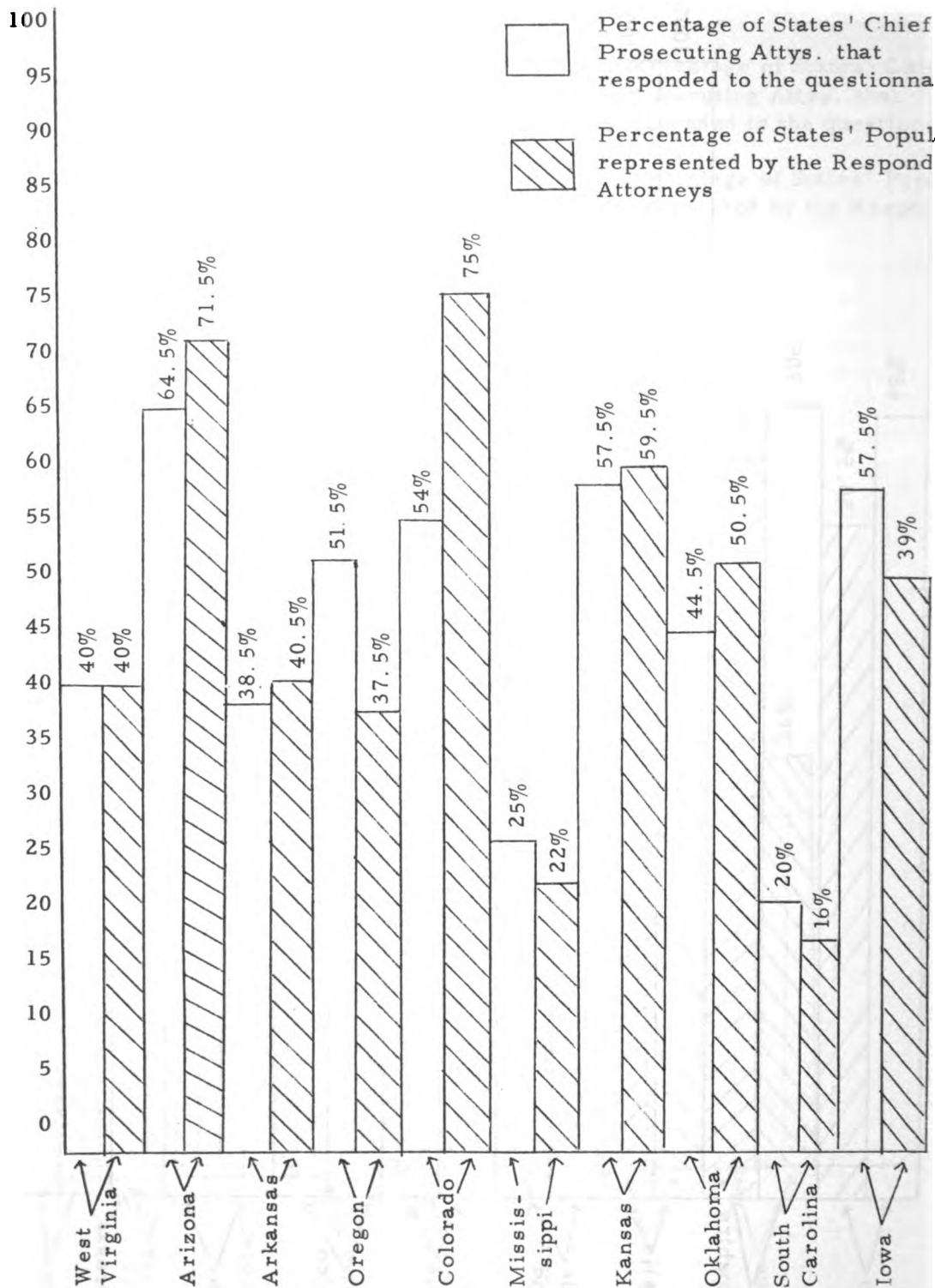
STATE POPULATIONS FROM 700,000 TO 1,500,000



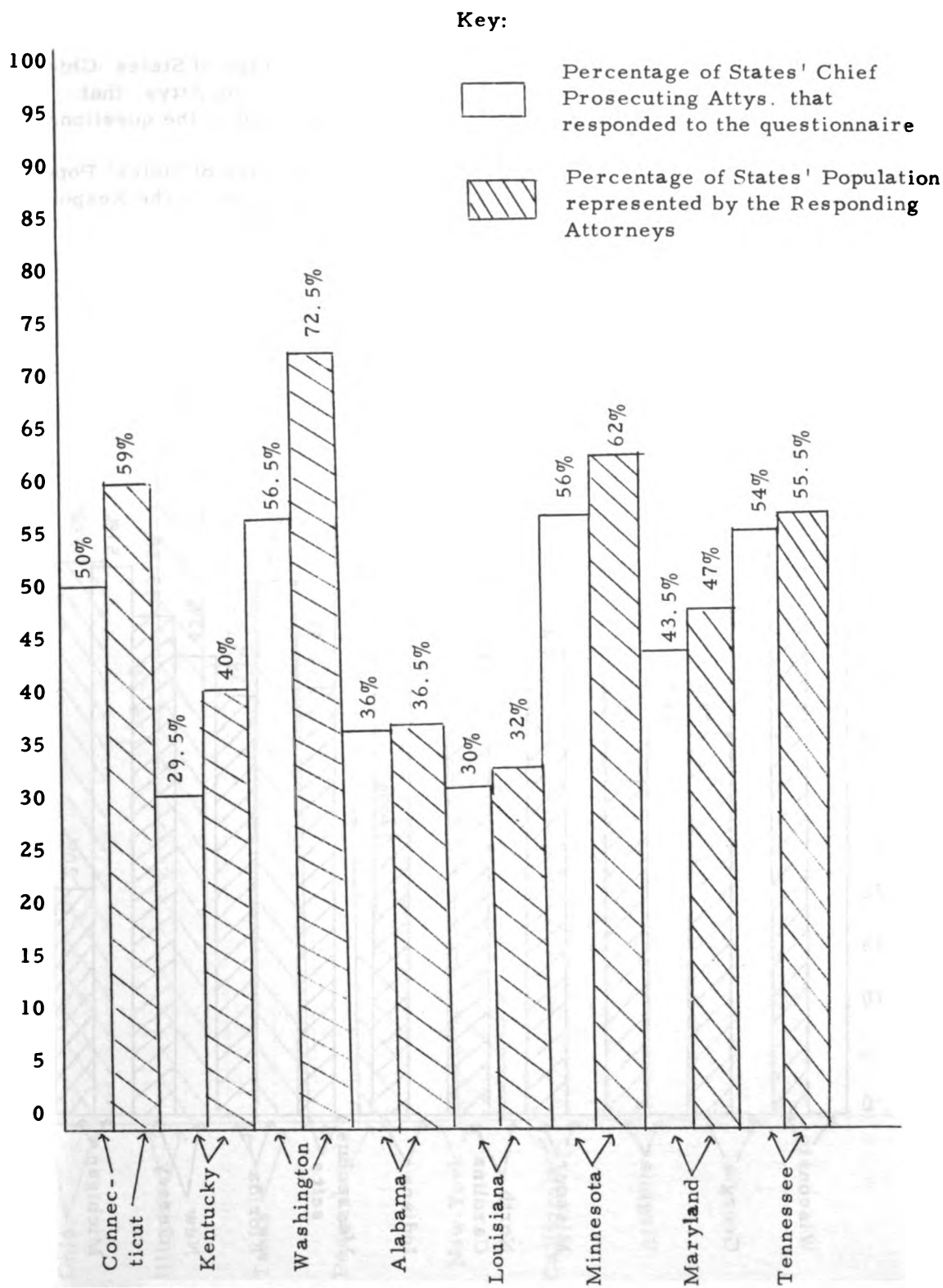
STATE POPULATIONS FROM 1,500,000 TO 3,000,000

Key:

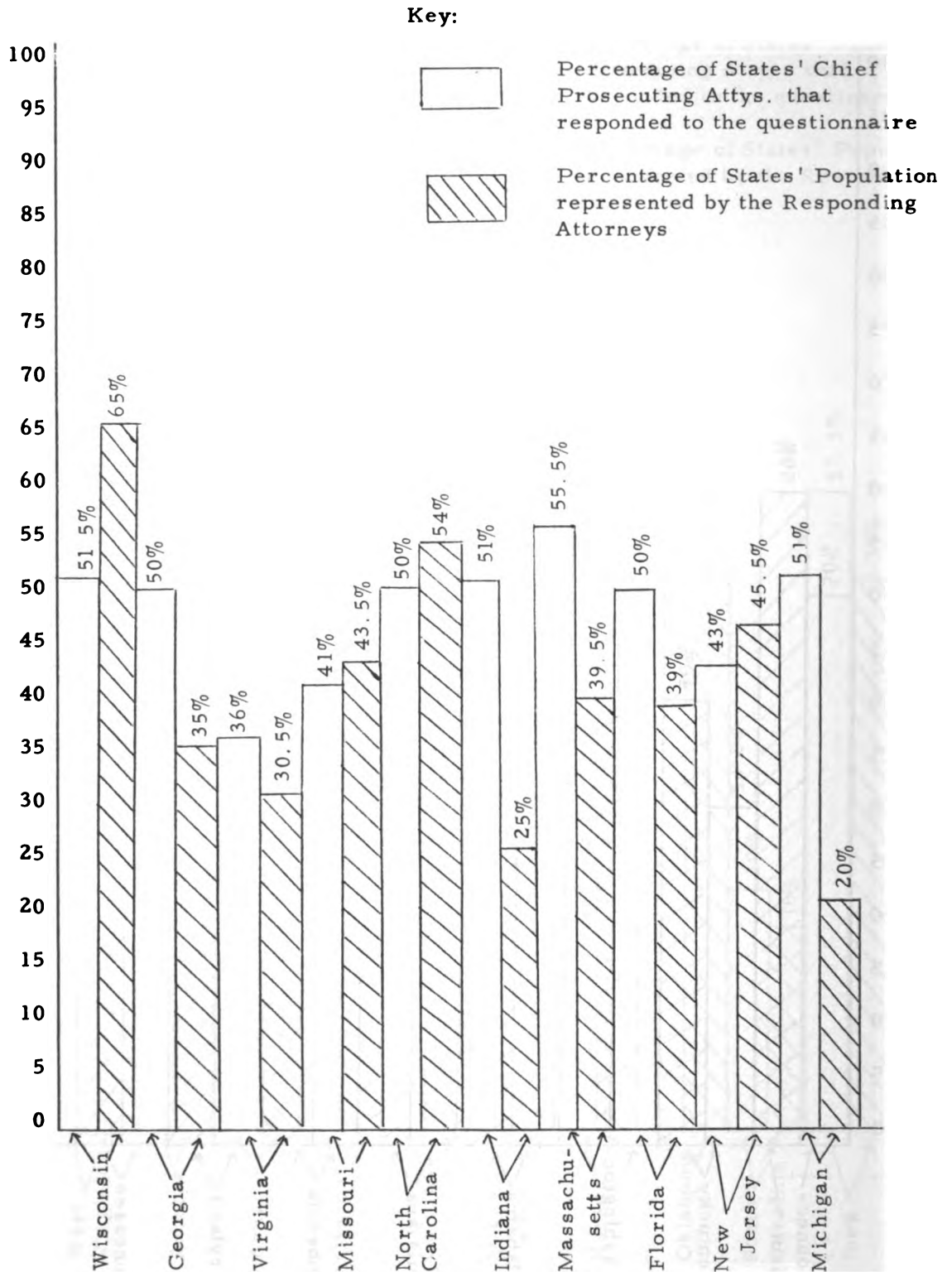
- Percentage of States' Chief Prosecuting Attys. that responded to the questionnaire
- Percentage of States' Population represented by the Responding Attorneys



STATE POPULATIONS FROM 3,000,000 TO 4,000,000





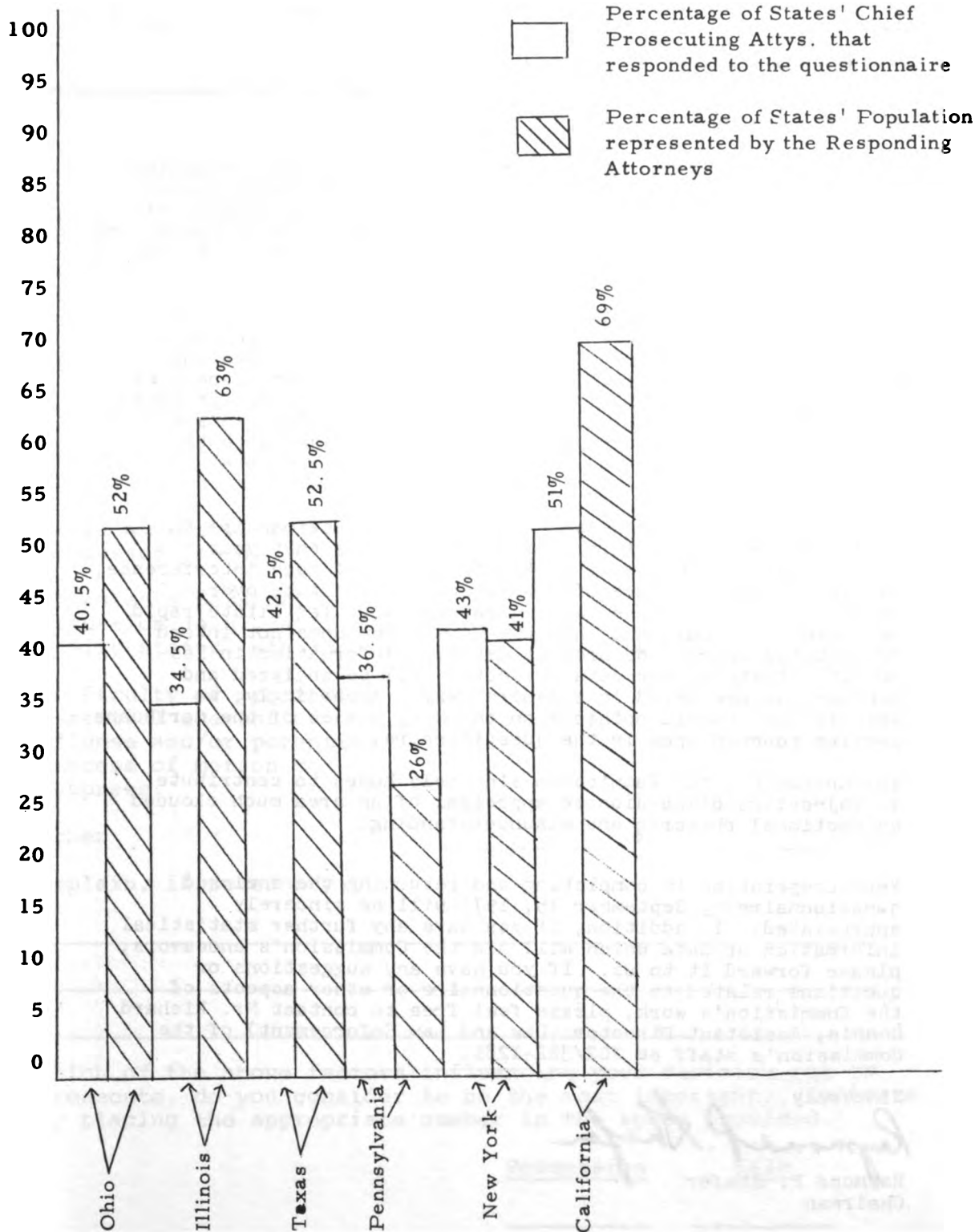
STATE POPULATIONS FROM 4, 000, 000 TO 10, 000, 000



STATE POPULATIONS OF 10,000,000 AND ABOVE

Key:

-  Percentage of States' Chief Prosecuting Attys. that responded to the questionnaire
-  Percentage of States' Population represented by the Responding Attorneys





National Commission on Marihuana and Drug Abuse

801 19th Street N.W.
Washington, D.C. 20006

August 20, 1971

Dear Mr. District Attorney:

As you probably know, the Comprehensive Drug Abuse Prevention and Control Act of 1970 established a National Commission on Marihuana and Drug Abuse to conduct comprehensive studies of marihuana and the causes of drug abuse in the United States, and to report its findings and legislative recommendations to the President and Congress.

During its first year, the Commission has been directed to focus on marihuana, covering the whole panoply of questions -- legal, scientific, social and moral -- associated with this major contemporary issue. Naturally, a significant aspect of our inquiry relates to the efficacy of existing legal controls in deterring use of this drug. In this connection, we are concerned both with actual enforcement policy and with the opinions of those in the best position to evaluate that policy -- the prosecuting attorneys themselves.

Accordingly, the Commission has devised a questionnaire to elicit the necessary information. We realize that your schedule will countenance a minimal amount of such interference; however, the importance of your response cannot be over-emphasized, and we have taken great pains to facilitate rapid response. I should add that the Commission does not intend to identify sources or present detailed information in its report. Instead, the data collected will be analyzed and conclusions presented in a general way. Accordingly, we solicit your candid opinions on the many phases of the marihuana problem touched upon in the questionnaire.

In conclusion, the Commission sincerely hopes to contribute an objective, dispassionate appraisal of an area much clouded by emotional rhetoric and misunderstanding.

Your cooperation in completing and returning the enclosed questionnaire by September 15, 1971 will be sincerely appreciated. In addition, if you have any further statistical information or data which will aid the Commission's endeavors, please forward it to us. If you have any suggestions or questions related to the questionnaire or other aspects of the Commission's work, please feel free to contact Mr. Richard Bonnie, Assistant Director (Law and Law Enforcement) of the Commission's staff at 202/382-1281.

Sincerely,

A handwritten signature in cursive script, reading "Raymond P. Shafer".

Raymond P. Shafer
Chairman

Enclosure

QUESTIONNAIRE FOR PROSECUTING ATTORNEYS

RESPONDING OFFICIAL: _____

SCHEDULE # _____

DATE COMPLETED: _____

I. PROSECUTION POLICY

- A. Please indicate below which factors influence your decision not to prosecute a person arrested for possession (first column) and sale (second column) of marihuana by placing an "X" in the appropriate space.

	<u>Possession</u>		<u>Sale</u>
Arrestee's age	_____ (1)		_____ (1)
Arrestee's lack of previous record	_____ (2)		_____ (2)
Small amount of marihuana possessed (sold)	_____ (3)		_____ (3)
Arrestee's personal situation (e.g., attitude, family status, etc.)	_____ (4)		_____ (4)
Difficulty of proof of essential element of offense and/or potential success of motion to suppress	_____ (5)		_____ (5)
Other	_____ (6)		_____ (6)

Explain, if necessary:

Which of the above factors influencing your decision not to prosecute, do you consider to be the most important? (Indicate by placing the appropriate number in the space provided.)

<u>Possession</u>	<u>Sale</u>
_____	_____

- B. Please indicate whether your office has an explicit or defined "minimum amount" policy or "rule of thumb" regarding prosecution of marihuana possession cases (i.e., possession of less than x amount will not be prosecuted) and sale cases (i.e., sale of less than x amount will be reduced to possession or not prosecuted at all) and whether these rules of thumb have been communicated to the police department.

	<u>Possession</u>	<u>Sale</u>
No - office has no rule of thumb or minimum amount policy:	<input type="checkbox"/> (2)	<input type="checkbox"/> (2)

(IF YOU HAVE MARKED "NO"
FOR BOTH POSSESSION AND
SALE, SKIP TO Q.IC)

Yes - office has such a rule of thumb or policy:	<input type="checkbox"/> (1)	<input type="checkbox"/> (1)
<u>IF YES:</u> Specify.	_____	_____
	_____	_____
	_____	_____

Has been communicated to police department	<input type="checkbox"/> (1)	<input type="checkbox"/> (1)
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Has <u>not</u> been communicated to police department	<input type="checkbox"/> (2)	<input type="checkbox"/> (2)
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- C. Does your office play any role in deciding whether or not to refer juveniles to juvenile court for marihuana violations?

No . . . ☐ (2)
Yes. . . ☐ (1)

IF YES: Please explain below.

II. GROUP ARRESTS

- A. Please indicate whether your jurisdiction has offenses which, in effect, proscribe "being in or remaining in a place with knowledge that drugs are being used" or "presence in an illegal establishment;" whether you have ever prosecuted for these offenses as applied to marihuana in your jurisdiction; and, if so, how many such prosecutions there were in calendar year 1970.

Does your jurisdiction have this type of offense:	<u>Being or remaining in a place with the knowledge of drug use there</u>	<u>Presence in an illegal establishment</u>
No	<input type="checkbox"/> (1)	<input type="checkbox"/> (1)
Yes, but have <u>never</u> prosecuted for this offense as applied to marihuana	<input type="checkbox"/> (2)	<input type="checkbox"/> (2)
Yes, and have so prosecuted in the past	<input type="checkbox"/> (3)	<input type="checkbox"/> (3)
and: in calendar year 1970	<u> </u> times	<u> </u> times

- B. Does your jurisdiction have a "constructive possession" rule?

No . . . (SKIP TO Q.IIIA) . ☐ (2)
 Yes. ☐ (1)

- C. In the situation where a group of people are arrested in a residence or other building (with the owner or lessee present), for example, during a "bust" of a "pot party," and no one admits possession or ownership, whom do you prosecute for possession of marihuana?

(CHECK ALL THAT APPLY)

	0	1	2	4
	<u>No</u>	<u>Owner</u>	<u>Those in</u>	<u>Everyone</u>
	<u>One</u>	<u>or</u>	<u>Reaching</u>	<u>on</u>
		<u>Lessee</u>	<u>Distance</u>	<u>Premises</u>
1. When there is only a small, usable amount of marihuana, e.g., one cigarette, which no one person is observed to possess and several persons are within reaching distance of the cigarette.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Where there are several cigarettes which no one person was observed to possess and several persons are within reaching distance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Where marihuana in usable form is present but not within anyone's immediate reach.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Where there are at least an equal number of persons and cigarettes with no one in reaching distance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

D. In the situation where marihuana is found in an occupied vehicle (with the owner present) but no one admits possession or ownership and all occupants are arrested, whom do you prosecute for possession of marihuana?

(CHECK ALL THAT APPLY)

	0	1	2	4	8
	<u>No</u>	<u>One Driver</u>	<u>Owner (if other than driver)</u>	<u>Those in Front/Back seat</u>	<u>Everyone in Vehicle</u>
1. When marihuana is found in the front seat but not in any person's actual possession.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. When marihuana is found in the back seat but not in any person's actual possession.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. When marihuana is found in a closed and/or hidden area (e.g., glove compartment, trunk, under dashboard, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

III. OTHER OFFENSES

- A. Please indicate whether or not your jurisdiction has separate offenses proscribing each of the following:

	<u>YES</u>	<u>NO</u>
Possession of narcotics paraphernalia	<input type="checkbox"/> (1)	<input type="checkbox"/> (2)
Possession of implements of crime	<input type="checkbox"/> (1)	<input type="checkbox"/> (2)
Maintaining a place where drugs are sold or used	<input type="checkbox"/> (1)	<input type="checkbox"/> (2)
Maintaining an illegal establishment	<input type="checkbox"/> (1)	<input type="checkbox"/> (2)
Narcotics vagrancy or similar offense	<input type="checkbox"/> (1)	<input type="checkbox"/> (2)

- B. Please indicate which of the following offenses have ever been used in marihuana prosecutions in your jurisdiction and specify how many times each was used in calendar year 1970. If never used, place an "X" in the box and on the line. (If actual numbers are not available estimates are acceptable.)

	<u>Ever Used</u>	<u>Number of Times in 1970</u>
Possession of narcotics paraphernalia	<input type="checkbox"/>	_____
Possession of implements of crime	<input type="checkbox"/>	_____
Maintaining a place where drugs are sold or used	<input type="checkbox"/>	_____
Maintaining an illegal establishment	<input type="checkbox"/>	_____
Narcotics vagrancy or similar offense	<input type="checkbox"/>	_____

IV. POLICE POLICY

- A. To your knowledge, does the police department make an identifiable effort to detect marihuana violations independently of traffic in "hard drugs?"

No . . . ☐ (2)

Yes. . . ☐ (1)

IF YES: Please explain.

- B. To your knowledge, what percentage of marihuana arrests in your jurisdiction would you estimate arise from:

Investigation into traffic in hard drugs	_____ %
Investigation into traffic in marihuana	_____ %
Street arrests	_____ %
Automobile arrests	_____ %
Arrest in connection with nondrug complaints or nondrug investigations	_____ %
Other	_____ %
	100%

V. SANCTIONS

- A. Is any use made of the technique of informal probation as a condition for withholding prosecution?

No . . . ☐ (2)

Yes. . . ☐ (1)

IF YES: Please explain.

- B. Does your office take an active part in recommending appropriate disposition in cases culminating in conviction?

No . . . ☐ (2)

Yes. . . ☐ (1)

Please rank in order the three most important factors affecting the dispositional recommendation.

1.

2.

3.

- C. As you know, judicial and/or legislative action in some jurisdictions has either precluded or limited incarceration for first-offense possession of marihuana. Do you favor this trend?

No . . . ☐ (2)

Yes. . . ☐ (1)

IF YES: Please explain.

D. Has it become customary in your jurisdiction for first offenders to receive only fines and/or probation?

No . . . ☐ (2)
Yes. . . ☐ (1)

E. It seems to be a current tendency among state and federal legislators to reduce the penalties for possession and maintain heavy penalties for sale. Do you favor this trend?

No . . . ☐ (2)
Yes. . . ☐ (1)

IF YES: Please explain.

VI. MARIHUANA AND PUBLIC POLICY

As you know, the Commission must conduct a comprehensive study of all phases of the marihuana problem - biomedical, sociological, legal and moral - and recommend the appropriate statutory approach. In this endeavor, the personal and professional opinions of all segments of the public constitute an indispensable element. Accordingly, your personal comments or observations on the following questions are essential.

A. Do you perceive the general increase in marihuana use primarily as:

(CHECK ONE)

Acceptance by many people of a new "social drug?" ☐ (1)

An integral part of a general societal trend toward drug-induced alteration of emotional states? ☐ (2)

An integral part of the contemporary youth subculture? ☐ (3)

A form of protest by the high school and college age youth? ☐ (4)

None of the above. (Explain below.) ☐ (5)

B. Much is being written about the effects of marihuana on the user. What do you believe are the principal physiological and psychological effects of marihuana on the individual?

PHYSIOLOGICAL

PSYCHOLOGICAL

C. Please answer "yes" or "no" to the following questions:

	<u>YES</u>	<u>NO</u>
Do you believe that the use of marihuana leads to use of "hard" drugs?	<input type="checkbox"/> (1)	<input type="checkbox"/> (2)
Do you believe that the use of marihuana causes aggressive behavior?	<input type="checkbox"/> (1)	<input type="checkbox"/> (2)
(Have you every <u>personally seen</u> examples of such aggressive behavior?)	<input type="checkbox"/> (1)	<input type="checkbox"/> (2)

D. Circle the number beside each proposition which indicates your opinion of the degree to which marihuana laws in your jurisdiction:

	<u>Significant Degree</u>	<u>Moderate Degree</u>	<u>Minimal Degree</u>	<u>Not at All</u>
Deter people under thirty years of age from initiating use, even on an experimental basis.	1	2	3	4
Deter people over thirty years of age from initiating use, even on an experimental basis.	1	2	3	4
Deter people under thirty years of age from continuing use after initial experimentation.	1	2	3	4
Deter people over thirty years of age from continuing use after initial experimentation.	1	2	3	4
Deter users from using marihuana regularly.	1	2	3	4
Deter users from using marihuana openly.	1	2	3	4
Deter users from transferring small amounts for little or no remuneration.	1	2	3	4
Deter users from selling large amounts for profit.	1	2	3	4

- E. To the extent that law deters possession and use of marihuana, which of the following factors do you regard as the primary deterrent?

(CHECK ONE)

- The fact that the conduct is against the law ☐ (1)
 The threat of prosecution. ☐ (2)
 The threat of being stigmatized as a criminal. ☐ (3)
 The threat of some incarceration ☐ (4)
 The threat of lengthy incarceration. ☐ (5)
 Other (Specify) _____ ☐ (6)

- F. To the extent that the penalty structure operates as a deterrent, do you think that:

(CIRCLE THOSE THAT APPLY)

More Less Same

Felony penalties deter more than, less than or about the same as misdemeanor penalties? 1 2 3

The threat of a one year prison sentence deters more than, less than or about the same as the threat of a thirty (30) day sentence? 1 2 3

A civil penalty applied with certainty deters more than, less than or about the same as the threat of incarceration sporadically applied? 1 2 3

- G. Some observers have recommended decriminalization of possession of moderate amounts of marihuana (replacing it by "violation" or "traffic ticket" treatment). Do you favor such a scheme?

No . . . ☐ (2)
 Yes. . . ☐ (1)

IF YES: Please explain:

- H. If such an approach were adopted, what adverse effect would it have on your ability to enforce proscriptions against sale?

(CHECK ONE)

Substantial effect. . . ☐ (1)
 Moderate effect . . . ☐ (2)
 Minimal effect. . . ☐ (3)
 No effect . . . ☐ (4)

- I. If such an approach were adopted, do you think the use of marihuana would:

(CHECK ONE)

Increase . . . ☐ (1)
 Decrease . . . ☐ (2)
 Remain about the same. . . ☐ (3)

- J. Do you favor "legalization" of marihuana (by adoption of a licensing scheme like that applied to alcohol or by adoption of any similar scheme)?

No . . . ☐ (2)
 Yes. . . ☐ (1)

Please indicate the type of scheme you would prefer.

- K. Circle the number beside each statement which indicates whether or not you believe that public opinion in your jurisdiction:

	<u>YES</u>	<u>NO</u>
Supports the present marihuana laws.	1	2
Would support an increase in penalties for possession of marihuana for personal use.	1	2
Would support a scheme which decriminalized possession for personal use	1	2
Would support legalization (by adoption of a licensing or similar scheme)	1	2

- L. What recommendations or other observations or comments would you care to make to the Commission?

VII. BACKGROUND INFORMATION

A. Population of your jurisdiction:

(CHECK ONE)

- Under 1,000. ☐ (01)
1,000 - under 2,500. ☐ (02)
2,500 - under 5,000. ☐ (03)
5,000 - under 10,000 ☐ (04)
10,000 - under 25,000. ☐ (05)
25,000 - under 50,000. ☐ (06)
50,000 - under 100,000 ☐ (07)
100,000 - under 250,000. ☐ (08)
250,000 - under 500,000. ☐ (09)
500,000 - under 1,000,000. ☐ (10)
1,000,000 or more. ☐ (11)

B. Would you characterize your jurisdiction as:

- Primarily urban. . . . ☐ (1)
Primarily rural. . . . ☐ (2)
Mixed. ☐ (3)

C. Number of prosecuting attorneys (including yourself) in your office:

(CHECK ONE)

- One ☐ (1)
Two to four ☐ (2)
Five to nine. ☐ (3)
Ten to twenty ☐ (4)
More than twenty. . . . ☐ (5)

D. Number of attorneys prosecuting drug cases in your office:

(CHECK ONE)

- One designated specialist only. ☐ (1)
A group of specifically designated attorneys. . . . ☐ (2)
(Specify number in this group: _____)
Any attorney in your office ☐ (3)

- E. Please provide the following information for your jurisdiction for calendar year 1970. (Place an "X" in the space for unavailable information). Indicate the requested number of prosecutions.

<u>Offense Category</u>	<u>Total</u>	<u>Felonies</u>	<u>Misdemeanors</u>
All crimes:	_____	_____	_____
All drug offenses:	_____	_____	_____
All marihuana offenses:	_____	_____	_____

- F. Please provide the following information regarding marihuana offenses only in your jurisdiction for calendar year 1970. (If the information is unavailable or you do not have one of the listed offenses in your jurisdiction, place an "X" in the appropriate space.)

<u>Offense Type</u>	<u>Number of Arrests</u>	<u>Number of Prosecutions</u>	<u>Number of Convictions</u>
Simple possession	_____	_____	_____
Possession with intent to sell/or possession of more than a specified amount	_____	_____	_____
Simple sale	_____	_____	_____
Sale to minor	_____	_____	_____
Cultivation	_____	_____	_____
TOTAL	_____	_____	_____

G. Please provide the following information for your jurisdiction regarding the statutory penalties for first offense possession and sale of marihuana. (If there are several provisions based on amount, provide answers only for those applicable to the smallest amount.)

1. <u>Legal Status:</u>	<u>Possession</u>		<u>Sale</u>	
Felony	<input type="checkbox"/>	(1)	<input type="checkbox"/>	(2)
Misdemeanor	<input type="checkbox"/>	(3)	<input type="checkbox"/>	(4)
Either/Discretionary	<input type="checkbox"/>	(5)	<input type="checkbox"/>	(6)

2. If you checked boxes (5) or (6), please specify below the factors on which you would base a decision to prosecute these offenses as felonies.

a. Possession: _____

b. Sale: _____

3. Statutory Penalties: (Specify in terms of total number of months.) (If there is no minimum, enter "X.")

	<u>Possession</u>	<u>Sale</u>
a. Minimum	_____ Mos.	_____ Mos.
b. Maximum	_____ Mos.	_____ Mos.

usually be from a rural southern judicial district with a marihuana problem of minor proportions.

The third group, which includes the preponderance of prosecutors, held opinions somewhere midway between the convictions of the other two. Prosecutors in this group had concluded that the present legal consequences of marihuana use were disproportionate and should be modified, but they were reluctant to relinquish legal control over its use. They tended to approve the existing trend to reframe the law and to limit instances of incarceration for marihuana offenders. And, although they were not certain of the actual effects of the drug, they were also not convinced that these effects were harmful. In general, the opinions of these prosecutors were in a state of flux and their prosecution policies reflected this.

In addition to delineating these three variations of prosecutorial opinion, the survey also examined enforcement policies. In this regard, it appears that enforcement policy was shaped as much by the prosecutor's conception of his role, his appraisal of the degree to which his personal judgment should be used in exercising his power, and the size of the caseload he must handle, as by his personal view of marihuana and its users.

What is most striking in the total picture is that almost three-fourths of the prosecutors, who are by occupation a conservative force for change, think the laws against marihuana use have need at least of the revisions they are currently in the process of receiving. Moreover, one out of two prosecutors think marihuana users should not be incarcerated, and one out of five that an even greater revision of the law is needed.

In view of the fact that 80% of these same prosecutors believed that public opinion in their jurisdiction supported existing law, and 50% that their jurisdictions would support increased penalties, this common advocacy of change is even more impressive than the actual numbers might suggest.

Opinion of Court Officials

The opinions of court officials about the efficacy of marihuana laws undoubtedly influence policy and practice with respect to the application of these laws. Judges, for example, have extremely broad discretion in the handling of marihuana cases and in the sentencing of marihuana law violators. Similarly, the opinions of probation officers and court clinicians influence the manner in which marihuana cases are handled and ultimately disposed of by the courts.

Accordingly, the Commission sponsored an opinion survey of nationally representative samples of judges, probation officers and court clini-

cians.²³ Self-administered questionnaires, developed by the contractor, were mailed to 2,252 judges (state trial, juvenile and special court judges), 216 probation officers and 270 court clinicians.²⁴ The response rates for the three groups were 41%, 57% and 48%, respectively.

After discarding from these responses incomplete questionnaires, most often returned by officials who had no jurisdiction over criminal cases or who reported no marihuana offenders in their caseloads, the final usable sample of 781 included 556 judges (24% of the judges to whom questionnaires were originally mailed), 110 or 50% of the probation officers, and 115 or 42% of the court clinicians (InTech, 1971: 5).

Table 1 shows the number of questionnaires sent, returned and ultimately used in the data analysis for each group of officials.

Table 1.—NUMBER OF QUESTIONNAIRES SENT, RETURNED AND USED

	Officials	Sent	Returned	Used
I	Judges.....	2,252	928 (41%)	556 (24%)
	State trial.....	1,003	397 (39%)	208 (20%)
	Juvenile.....	1,029	418 (40%)	294 (28%)
	Special.....	220	113 (51%)	54 (24%)
II	Probation officers.....	216	125 (57%)	110 (50%)
III	Court clinicians.....	270	130 (48%)	115 (42%)

In contrast to the District Attorney sample which was primarily rural in character, 62.6% of the respondents to this survey represented populations of 100,000 or more, with the greatest number representing jurisdictions between 100,000 and 500,000 in size. In addition, two-fifths of the respondents reported that their jurisdictions were primarily urban in character (InTech, 1971: 28).

All respondents indicated familiarity with the increasing incidence of marihuana offenses and stated that this increase was reflected in their caseloads. Eighty-three percent reported that although the number of all drug offenders they handled had increased markedly over the last five years, the incidence of marihuana offenses had increased more rapidly than that of any other type of drug

²³ InTech Corporation, "Final Report—Research on Marihuana Use as a Contributing Factor in the Commission of Criminal Acts As Well As Juvenile Delinquency." Prepared for the National Commission on Marihuana and Drug Abuse (November 19, 1971). This document is on file and available for inspection at Commission headquarters.

²⁴ A description of the methodology (sample design) and questionnaire construction along with a complete copy of the questionnaire utilized in this survey is included at the end of this chapter.

offense. (InTech, 1971: 31). Even so, most indicated that marihuana users did not make up the bulk of their caseload. (InTech, 1971: 34-35).²⁵

Judges, probation officers and clinicians all indicated that most of their cases dealt with offenders under 35 years of age. This finding is consistent with the findings of other Commission studies which suggest that in marihuana cases youthful offenders predominate at the dispositional level.

Attitudes Toward the Marihuana User

Almost all of the officials questioned in the survey avoided stereotypes in characterizing marihuana users.

Respondents were given a series of fifteen statements which might describe persons who regularly use marihuana. They were asked to indicate for each statement whether it fit the description of all, most, some, a few or none of the users. In almost every case, the category "some" was chosen by the highest percentage of respondents, therefore indicating a hesitancy toward stereotyping. Interestingly, only a few users were thought to be professionals in such fields as law, medicine and teaching, and only 30% of the officials stated with certainty that none of the users was physically addicted to the drug.

More than one-fifth of the respondents claimed that most regular users were showing their rebellion against society (38%), were unmotivated either to work or study (28%), used marihuana only because their friends do and they don't want to feel left out (23%), are hippies (20%), are white middle class youth (24%), are emotionally or psychologically maladjusted (32%) and have little will power or self-control (29%).

These responses are also interesting in comparison to those received from the District Attorneys, responding to another survey instrument. Although 50% of the prosecutors associated the increase in marihuana use with the younger generation, only 18% defined use as a means of protest.

Opinions About the Effects of Marihuana

On the whole, court officials were not convinced of the traditional hypotheses regarding the ill effects of marihuana.

²⁵ The survey was unable to collect hard data as to the percentage of offenders in each type of official caseload who were: (1) arrested for use; (2) arrested for sale; (3) involved in non-drug offenses where use or sale was also charged; (4) regular users; and (5) users whose use led to some criminal act. Most respondents either reported that these data were unavailable, or provided an estimate.

About 6% said the most marihuana users went on to heroin, about 45% said some users went on to heroin and about one in four thought only a few marihuana users fit into the "stepping stone" pattern. It is of interest that almost 50% of clinicians thought that very few regular users of marihuana try heroin (InTech, 1971: Appendix I, Section II).

Judicial officials were also not convinced that "use of marihuana causes or leads to antisocial behavior in the sense that it leads one to commit other criminal or delinquent acts." Thirty-four percent of judges, 18% of probation officers, and 2% of clinicians thought that criminal or other delinquent behavior was induced by marihuana use (InTech, 1971: Appendix T, Section II, Q3). All of these officials were less convinced than prosecutors, 38.5% of whom thought marihuana "leads to aggressive behavior."

The "addiction potential" of marihuana is a concern recurring throughout the Commission's opinion surveys. Even though marihuana users do not become physically dependent on the drug,²⁶ 75.3% of judges, 39% of probation officers, and 25% of clinicians think that it is "addictive" in some cases, and on the average 17% of all groups are not certain whether it is "addictive" or not (InTech, 1971: Appendix I, Section II, Q40).

As to the perceived socially "undesirable" correlates of use, one-third of the judges, 20% of probation officers and 14% of clinicians think users are unmotivated to study. About a fourth of each group thinks that users are sexually promiscuous.

Attitudes Toward Control of Marihuana

The survey instrument also elicited opinions about the appropriate scheme for controlling marihuana use. Control of possession and of sale were considered separately.

Possession

Of particular interest is whether the officials within the criminal justice system believe that the act of possessing marihuana ought to be a crime. The survey queried whether in light of the legal and social consequences of a criminal record (e.g. possible loss of voting rights, disqualification from positions of public trust, denial of the right to practice medicine or law, etc.) treating possession as a crime was appropriate.

²⁶ See Part I Chapter II of this Appendix.

Table 2.—PREFERRED LEGAL CONSEQUENCES FOR ACT OF POSSESSION

[In percent]

Statutory scheme	Judges	Probation officers	Clinicians
Control outside criminal system (counseling, education).....	24.3	35.5	74.0
Expungement of criminal record (upon good behavior).....	57.9	54.5	22.6
Control within system resulting in permanent criminal record.....	11.5	9.0	0.0

(InTech, 1971: appendix I, section III, Q5).
Percentages do not add to 100% because an average of 5.1% of the sample did not express an opinion.

The data in Table 2 indicate that about one-fourth of the judges, one-third of the probation officers and three-fourths of the clinicians preferred a statutory scheme for controlling marijuana which did *not* make possession a criminal act.

Almost all of the remaining respondents (five out of six judges, six out of seven probation officers and all of the clinicians) thought that if possession were to remain a prohibited act then the criminal record should be expunged upon good behavior.

Assuming, next, that possession of marijuana continued to be a crime, the survey instrument inquired about what sentence judges, probation officers and clinicians thought appropriate in possession cases.

TABLE 3.—DESIRED PENALTIES FOR POSSESSION

[In percent]

Specific penalties	Minors			Adults		
	Judges	Probation officers	Clinicians	Judges	Probation officers	Clinicians
Incarceration.....	4.2	1.8	1.0	12.9	8.2	1.8
Fine or probation.....	22.0	17.3	9.6	28.5	18.2	12.2
Civil commitment.....	15.9	19.1	7.0	12.6	10.0	5.2
Counseling by court referral.....	37.1	47.3	41.7	17.8	33.6	13.0
None.....	3.2	4.5	33.0	10.6	15.5	63.5

Notes:

(InTech: 1971 appendix I, section III, Q3 and Q4a).

Percentages do not add to 100% because an average of 15.2% of the sample did not express an opinion or expressed an opinion other than those designated.

The data in Table 3 indicate that 4% of all judges would incarcerate a minor for some length of time for the offense of possession; and 13% would incarcerate an adult. Indeed, the penalty preferred for youthful users by judges, probation officers and clinicians alike is counselling, accomplished through, and ensured by, court referral. With respect to adults, agreement on the appropriate penalty is less pronounced. The overwhelming majority of clinicians would apply no penalties to possession for personal use. Judges and probation officers were divided over which alternative, the imposition of fines and probation or required counselling, is the most appropriate. Small numbers of each group preferred incarceration.

In comparison with these two sets of answers, the responses to the next questions in the survey instrument varied somewhat. The survey asked specifically whether criminal penalties for possession should be abolished. The data in Table 4 indicate that small percentages of judges (9%) and

probation officers (11%), but 53% of the clinicians would abolish the possession offense.

Table 4.—WHAT COURSE SHOULD CHANGE IN LAW TAKE?

[In percent]

What course change in laws should take	Re: Possession		
	Judges	Probation officers	Clinicians
Abolish criminal penalties....	8.6	10.9	53
Make penalties more lenient..	37.8	28.2	35.7
Keep same penalties.....	43.2	43.6	8.7
Make penalties more severe..	6.8	10.9	2.6

NOTES:

InTech: appendix I, section III, Q2a.

Percentages do not add to 100% because an average of 3.5% of the sample did not express an opinion.

As a general rule, judges, probation officers, and clinicians do not believe that the traditional attributes of the criminal system are the best tools for

dealing with the problem of marihuana use. Yet about one-half of the judges and probation officers would be reluctant to make the present penalties more lenient. Apparently because of the nature of their roles in sentencing and supervising defendants, judges and probation officers desire maximum flexibility and a wide range of permissible dispositions enabling them to treat different offenders differently.

On the other hand, clinicians, who treat and examine rather than supervise and dispose, are less satisfied with alternatives presently provided by the law; 89 percent, therefore, would elect either to do away with the law altogether or to make it more lenient. Small percentages of each group would make the penalties more severe (7% of the judges, 11% of the probation officers and 3% of the clinicians).

Finally, the survey approached the control of marihuana use from another point of view. Respondents were asked what would be the most appropriate posture for society to adopt in dealing with marihuana users. The data in Table 5 sug-

gest that most judges, probation officers and clinicians believe that society should register some concern with respect to marihuana use, particularly when use is primarily a youthful phenomenon. Nonetheless, even among judges, who as a group are most inclined to think that society's approach to marihuana control should be through the traditional criminal system, only 11% indicate they would apply customary criminal sanctions to juvenile users. One-half or more of each of the three groups would utilize control mechanisms of an informal, noncompulsory nature, such as education or counselling for juveniles.

Decreasing percentages of judges (25%), probation officers (14.5%) and clinicians (3.5%) would require treatment as their preferred alternatives to criminal control. Conversely, one-fourth of the clinicians would allow minors to make their own decision about whether or not to use marihuana, as compared to small percentages of the judges (less than 1%) and probation officers (4%).

Table 5.—PREFERRED FORM OF SOCIAL CONTROL FOR MARIHUANA USE

[In percent]

Degree	Preferred form	Juvenile users			Adult users		
		Judges	Probation officers	Clinicians	Judges	Probation officers	Clinicians
Slight (informal control).....	Personal choice.....	0.7	3.6	22.6	11	21.0	61.7
	Informal social control.....	43.0	57.3	47.8	22	32.7	21.0
Moderate (noncriminal formal control).....	Required treatment.....	25.4	14.5	3.5	21	11.8	1.0
	Other.....	12.4	11.8	22.6	11	10.0	10.0
Strong (criminal control).....	Criminal law.....	10.8	7.3	1.7	25	15.5	3.5

Notes:

InTech: appendix I, section III, Q1 a and b.
In the discussion of juvenile users, percentages do not add to 100% because an average of 6.5% of the sample did not express an opinion.

In the discussion of adult users, percentages do not add to 100% because an average of 9.2% of the sample did not express an opinion.

Where adults are concerned, larger proportions of each group would adopt the polar positions, either deferring to individual choice or imposing traditional criminal sanctions. For example, 11% of the judges, 21% of the probation officers and 61.7% of the clinicians would defer to personal choice in the matter. At the other end of the spectrum, one-fourth of the judges, 15.5% of the probation officers and 3.5% of the clinicians would utilize the traditional criminal system.

Sale

The data in Table 6 indicate that these officials would treat sales in a different manner. There is

heavier reliance on incarceration among all groups than was the case for possession. The respondents also distinguished between sales by minors and by adults and were particularly harsh on sales to minors. Thirty-nine percent of the judges and one-fourth of the probation officers would incarcerate a minor for sale; half of the judges and 45% of the probation officers would jail an adult for sale. Smaller proportions of clinicians would incarcerate an adult seller (15.7%) or a juvenile seller (10.5%). (The survey did not isolate transfers of marihuana without remuneration or at cost to determine whether officials would treat accommodation sales, the usual means by which marihuana is distributed, differently from sales for profit).

Table 6.—DESIRED PENALTIES FOR SALE

[In percent]

Specific penalties	Minor sale			Adult sale			Sale to minor		
	Judges	Probation officers	Clinicians	Judges	Probation officers	Clinicians	Judges	Probation officers	Clinicians
Incarceration.....	39.6	25.4	10.5	51.0	45.4	15.7	68.8	60.0	39.9
Fine or probation.....	19.1	22.7	20.9	11.4	15.5	18.3	5.0	8.2	13.0
Civil commitment.....	6.5	8.2	9.6	5.8	6.4	13.9	1.8	6.4	14.8
Counseling by court referral.....	15.3	25.5	36.5	12.6	14.5	9.6	7.4	10.9	15.7
None.....	0.4	3.6	11.3	3.8	8.2	35.7	0.5	0	7.8

NOTES:

InTech: appendix I, section III, Q 3b, 4b, 3c.

Minor sale percentages do not add to 100% because an average of 17.5% of the sample either did not express an opinion or expressed an opinion other than those designated.

Adult sale percentages do not add to 100% because an average of 13.5% of the sample either did not express an opinion or expressed an opinion other than those designated.

Sale to minor percentages do not add to 100% because an average of 15% of the sample either did not express an opinion or expressed an opinion other than those designated.

CONCLUSION

Most judges, probation officers, and clinicians seem to agree that society's present approach of controlling marihuana use with traditional criminal sanctions is inappropriate. Almost all of these officials would prefer a legal scheme which at least eliminated the consequences of involvement in the system and half would approve as an alternative to punishment, counselling and treatment of either a formal or informal nature. Very few of the respondents approved imprisonment of marihuana users.

Other Commission studies show that in most jurisdictions the policy of the judiciary is in fact to sentence first offenders by fine or probation only. Thus, the disapproval of incarceration emerging from this opinion survey reflects current judicial, probationary and clinical recommendations for disposition and the actual disposition of marihuana cases.

As alternatives to the present scheme, all groups seem to favor some type of counselling program of either an informal nature or as a required part of the processing of a typical marihuana case. Although they approve of drug education, they believe it is more adequate as a tool to inform and discourage potential users than as a weapon with which to deter actual users. (InTech, Appendix I, Section IV-Q. 1a, 1b, 1c) The "counselling" for which preference was expressed in this survey would presumably be directed to personal and emotional difficulties rather than to providing users with information about use.

Judges and probation officers, disapproving of marihuana use, believe that society's role should be to discourage such use, and they have faith in the efficacy of some system of formal, non-punitive control as a means of doing so. Clinicians are more permissive. They prefer that the matter of use be left up to individual choice, society's role being to assure that the choice is an informed one.

Methodology²⁷

For

"A Final Report—Research on Marihuana Use as a Contributing Factor in the Commission of Criminal Acts As Well As Juvenile Delinquency"

Sample Design

Three professional groups were selected for obtaining the necessary information about crime and its relation to marihuana use. They were (1) judges, broken down into three subgroups: state trial, juvenile, and special judges, (2) probation department personnel and (3) court clinicians, made up of two broad subgroups: psychiatrists and clinical psychologists. No attempt was made to analyze subgroups of probation officials of clinicians. Because they presumably serve distinct populations, the separation of the three subgroups of judges was maintained in some instances. However, the returns indicate that the lines between these groups are unclear. Many state trial judges see juvenile offenders and some juvenile judges see adult offenders. Although there are a few references to differences between subgroups of judges, the bulk of the analysis deals with the combined group of judges.

All three of the major professional groups can be assumed to have some contact with the problem of drug abuse since they represent three critical contact points between the offender and law enforcement agencies. The extensiveness of their contact is tapped in Section I of the questionnaire and, indirectly by questions about their background, in Section V.

Every effort was made to assure that persons and agencies to be surveyed via a mail questionnaire were selected in such a manner as to be nationally representative of the three target groups under consideration: judges, probation departments, and court clinicians. In addition, to assure that an adequate and proper determination would be made of the degree, if any, to which marihuana use is a contributing factor in the commission of criminal acts as well as juvenile delinquency, two additional factors were built into the sample. These two factors were: consideration and inclusion of areas known to have high crime rates and, secondly, areas purported to have a high incidence of marihuana use—namely those areas which include the college campuses.

To this end, probability samples were selected as follows:

Adult and Juvenile Court Judges

Two stratified probability samples, each representative of the designated group, were developed. Each sample was stratified by State and within State by three designated community size areas. The number of elements to be contained in each community size strata or subsample, was to parallel as closely as possible the total national crime index ratio indicated for the designated community sizes. Finally, elements within each subsample were randomly chosen.

Definitions of the three community size strata utilized associated with the total national crime index, were derived from the FBI Uniform Crime Reports, and are as follows:

- **Standard Metropolitan Statistical Areas (SMSA)**—Areas generally made up of an entire

county or counties having at least one core city of 50,000 or more inhabitants, with the whole meeting the requirements of certain metropolitan characteristics. In New England, "town" instead of "county" is used to describe SMSA.

- **Other Cities**—Urban places outside SMSA. Most of those places of 2500 or more inhabitants are incorporated.

- **Rural Areas**—Those areas made up of the unincorporated portions of counties outside of urban places and SMSA.

A detailed description of the design of both the adult judge sample and the juvenile judge sample follows.

Individual national listings of adult and juvenile judges, each with a known size (N) and each classified by state, were obtained. For each judge listed a determination was made of the type of community—rural, other cities, or SMSA—within which his jurisdiction was located. In this manner each sample was stratified by state, and within states further stratification by community size designation was accomplished.

The actual number of elements to be randomly chosen within each community strata of each state was determined as follows:

- Based upon the commonly accepted premise that a 25% return is a "good" or "average" response rate that may be expected from a mail survey, and since a return of 300–500 adult and juvenile judge respondents was desired, a proposed population size of 2000 was decided upon for this combined group.

This proposed combined population size of 2000 was then divided in proportion to the total known population size (N) of each group—juvenile judges (4362) and adult judges (4200)—providing proposed sample sizes of 1020 for the juvenile judges and 980 for the adult judges.

- Using 1970 census data, the total population of juveniles, ages 7–17, in each state and in the nation was determined, from which the percentage of juveniles by state was computed. In the same manner, the total population of adults, ages 18–75, in each state and in the nation was determined. These figures then were employed in determining the percentage of adults by state.

The number of juvenile judges to be sampled in each state was a factor then of that percentage of juveniles in the nation which were contained in the state and the proposed juvenile judge sample size of 1020. Likewise the number of adult judges to be sampled in each state was a factor of that percentage of adults in the nation which were contained in the state and the proposed adult judge sample size of 980.

- The above procedures provided two samples: one of juvenile judges and the second of adult judges, each stratified by state according to population, and further stratified within state according to community size: rural, other cities, and SMSA.

However, since the scope of work indicated a determination of the degree, if any, to which marihuana use is a contributing factor in the commission of criminal acts as well as juvenile delinquency, two factors—areas of high crime and areas purported to be high in marihuana use, namely the college campuses—were built into the sample.

The most readily available statistics regarding national crime rates were those contained in the FBI Uniform Crime Reports. At the time of sample selection, however, the FBI Uniform Crime Reports of 1970 were not available; therefore data regarding the total national crime

²⁷ InTech, 1971: 12–22.

index were obtained from the Uniform Crime Reports of 1969. Here it was determined that the total crime index for rural areas, other cities, and SMSA was in the approximate ratio of 1:2:4.

In each state, the number of elements, juvenile judges or adult judges, to be contained within the three designated community size strata of the state were distributed as closely as possible over the three strata in accordance with the ratio 1:2:4. Within each strata, elements were then chosen randomly.

Actually, it was not possible to maintain the 1:2 ratio of rural to other cities. This was due to the fact that the total number of judges identified whose total jurisdiction was composed only of rural communities, was not sufficient in all States to maintain this ratio. The final ratio of rural to other cities was 1:7.

The final adult judge sample size so chosen was 1008. The final juvenile judge sample size was 1029.

- The intent of including areas purported to be high in incidence of marijuana use—the college campuses—was automatically built into this sampling scheme. A rank order listing, by population of the 55 largest colleges and universities in the nation² indicated that of these 55, 42 were located within SMSA, ten were located within communities described as other cities, two were in rural communities and one (Puerto Rico) was outside the 50 state sampling.

Special Judges

A probability sample of special judges was selected in the manner described above for adult and juvenile judges with these exceptions:

- The listing of special judges was incomplete and therefore of unknown population size. For this reason during sample design these special judges were handled as a separate and unique group. An arbitrary proposed population size of 200 was determined sufficient.

- Since special judges have jurisdiction over both juveniles and adults, the total population by state and in the nation of the age group 7-75 was determined. This figure was then used in determining for each state the percentage of adults and juveniles as a group. The determination so made for each state was distributed as closely as possible over the three community strata in the ratio 1:2:4.

- The final special judge sample size so chosen was 220.

Probation Departments

A probability sample, stratified by State, was selected. The final sample size (N) for this group was 216. Elements of the sample consisted of: the probation office(s) of the largest county of each state and the probation office(s) contained in three additional randomly selected counties of each state.

Court Clinicians

Numerous attempts were made to obtain a national listing of court clinicians or clinics utilized by the courts. Initially the American Psychiatric Association was contacted and was able only to provide literature relating to the offender. Additional contact was made with the Na-

tional Institute of Mental Health; the Psychiatric Clinic of Supreme Court, New York and Bronx Counties; several State Departments of Welfare; and finally the American Academy of Psychiatry and the Law.

Although a national list was not available, Dr. Jonas Rappeport, President of the American Academy of Psychiatry and the Law, agreed to assist us in compiling a representative listing of clinicians. Dr. Rappeport provided us with a booklet listing Adult Psychiatric Court Clinics, most of which were located in the eastern section of the country. In addition, he compiled a list of adult and juvenile clinicians from various sections of the country. These data provided the nucleus of the ultimate list of clinicians.

The Director of each clinic and the clinicians within this nucleus were contacted and asked to participate in the survey. At the same time information was obtained leading to the identification of additional participants both demographically and geographically consistent to provide a national representation.

In addition to court clinicians, questionnaires were sent to the Psychiatric Services Division of the Walter Reed General Hospital and the U.S. Disciplinary Barracks at Fort Leavenworth, Kansas. The total number of questionnaires sent out to clinicians was 270.

After the sample population was selected, a letter was sent to participants, soliciting their cooperation. Approximately two weeks later the questionnaires were sent directly to each participant with an accompanying letter including directions for completion, the desired date of return, and a self-addressed, stamped envelope. Participants who did not respond within two weeks were sent follow-up letters requesting that questionnaires be returned as soon as possible.

Sample returns are summarized in Tables 1, 2, and 3. Table 1, summarized by region based on the United States Census Classification of Region, compares the original sample sent with those returned, and then with those used in the analysis. From this table it can be seen that 24% of the original sample of judges was used in the analysis, 50% of the original probation officer sample was used and 42% of the clinician sample was used. These percentages remain fairly intact across regions. Table 2 breaks down the judge sample according to community size and type of judge. Again, the ratio of used to sent remains fairly uniform.

The smaller return of the judge sample is a logical one since not all judges see criminal cases. This can be inferred in part, from an examination of Table 3 which consists of the responses of 402 individuals who replied but did not complete the questionnaire. All but 25 of these are judges and the major reason given for not filling out the questionnaire is "not applicable."

Table 1.—RESPONSE RATE BY REGION*

	Judges				
	Sent	Re- turned	Per- cent re- turned	Used	Per- cent used
Northeast.....	141	53	(37)	37	(26)
North-central.....	1015	440	(43)	251	(24)
South.....	688	275	(39)	156	(21)
West.....	408	160	(39)	112	(27)
Total.....	2252	928	(41)	556	(24)

See footnote at end of table.

* Information Please Almanac, Atlas and Yearbook, 1971, Simon and Schuster, New York, New York, based on accredited U.S. Senior Colleges and Universities, Spring, 1970.

Table 1.—RESPONSE RATE BY REGION*—Continued

Probation officers					
	Sent	Re- turned	Per- cent re- turned	Used	Per- cent used
Northeast.....	15	6	(40)	5	(33)
North-central.....	76	46	(60)	41	(53)
South.....	63	30	(47)	28	(44)
West.....	62	43	(69)	36	(58)
Total.....	216	125	(57)	110	(50)
Clinicians					
	Sent	Re- turned	Per- cent re- turned	Used	Per- cent used
Northeast.....	30	11	(36)	11	(36)
North-central.....	151	73	(48)	64	(42)
South.....	57	32	(56)	26	(45)
West.....	32	14	(43)	14	(43)
Total.....	270	130	(48)	115	(42)

*Region as used in this table is based on U.S. Census Classification of Region. The questionnaire used a more refined regional breakdown.

Table 2.—RESPONSE RATE OF JUDGES BY COMMUNITY SIZE

	Sent	Re- turned	Per- cent re- turned	Used	Per- cent used
State Trial Judges					
SMSA.....	631	236	(37)	122	(19)
Other.....	320	140	(43)	72	(22)
Rural.....	52	21	(40)	14	(25)
Total.....	1,003	397	(39)	208	(20)
Juvenile Judges					
SMSA.....	611	250	(40)	176	(28)
Other.....	366	143	(39)	101	(27)
Rural.....	52	25	(48)	17	(32)
Total.....	1,029	418	(40)	294	(28)
Special Judges					
SMSA.....	183	97	(53)	48	(26)
Other.....	33	14	(42)	6	(18)
Rural.....	4	2	(50)	0	(0)
Total.....	220	113	(51)	54	(24)
Total—All Judges					
SMSA.....	1,425	582	(40)	346	(24)
Other.....	719	297	(41)	179	(24)
Rural.....	108	49	(45)	31	(28)
Total.....	2,252	928	(41)	556	(24)

Table 3.—SUMMARY OF 402 REPLIES NOT INCLUDED IN ANALYSIS

Replies	N	Percent
No or limited drug problem.....	86	21
Lack of time or personnel.....	19	5
Not applicable*.....	196	49
No longer in pertinent position.....	52	13
Illness.....	7	2
Deceased.....	17	4
Miscellaneous.....	25	6
Total replies not include in analysis..	402	100

*Includes those who have no jurisdiction or not enough experience in drug abuse and/or criminal cases.

Construction of the Questionnaire

The questionnaire was designed to elicit information in five areas. Section I is concerned with obtaining information on the respondents' actual experience with drug offenders as well as some demographic data on the characteristics of these offenders. As such, it is the one place in the questionnaire which contains factual data pertaining to marijuana use and its relation to crime.

Section II elicits opinions about the relation between criminal or delinquent behavior and marijuana use. It also contains a set of fifteen statements which sample certain commonly held beliefs about the characteristics of marijuana offenders. Thus, it gives experienced professionals an opportunity to respond to some of the stereotypes which have been associated with marijuana use.

Section III contains a series of questions dealing with the problems of controlling marijuana use. It samples attitudes about the handling of juvenile and adult offenders, the issue of marijuana possession contrasted with marijuana sales, and the interrelationships between these variables.

Section IV contains a brief survey of opinions about the effectiveness of drug education for preventing, deterring and informing people about the consequences of drug use.

Section V is essentially a demographic survey of the background of the respondents. It covers personal characteristics of the respondents, such as age, sex, experience, as well as characteristics of the jurisdiction which they serve.

The questionnaire is constructed so that summaries can be made for each of the five sections, thus characterizing facts and opinions about marijuana use as reported by the respondents. It also allows for an analysis which interrelates selected questions both within a section and across sections.

Extra space has been provided in selected areas of the questionnaire, which allows the respondent to specify his responses, or to add additional information.

**SURVEY
FOR
THE NATIONAL COMMISSION ON MARIHUANA AND DRUG ABUSE**
INTECH CORPORATION
116 South Main Street
Wilkes-Barre, Pa. 18701

SECTION I - YOUR CASELOAD

1. Thinking about your caseload during the last five years, has the number of offenders apprehended for drug or drug-related offenses (i.e., actual possession or sale of controlled substances, or cases in which drugs were identified during the investigation of a non-drug offense):

1. ____ Increased sharply? 3. ____ Remained about the same? 5. ____ Decreased sharply?
2. ____ Increased slightly? 4. ____ Decreased slightly?

2. Of the drugs listed below, please indicate which have increasingly come to your attention, decreasingly come to your attention, or remained about the same. (Check ONE for EACH statement)

	<u>Increased</u>	<u>Decreased</u>	<u>Same</u>
a. Prescription sleeping pills or barbiturates (e.g., seconal, amytal, nembutal, reds, blues, yellow jackets, etc.)	1. ____	2. ____	3. ____
b. Prescription stimulants (amphetamines such as dexedrine, benzedrine, ups, bennies, dexies, etc.)	1. ____	2. ____	3. ____
c. Methedrine (speed, methamphetamine)	1. ____	2. ____	3. ____
d. Heroin	1. ____	2. ____	3. ____
e. Cocaine	1. ____	2. ____	3. ____
f. LSD	1. ____	2. ____	3. ____
g. Psychedelics other than LSD (e.g., mescaline, peyote, PCP, DOM, STP, MDA)	1. ____	2. ____	3. ____
h. Inhalants (glue, gas, paint thinner, rug cleaner)	1. ____	2. ____	3. ____
i. Hashish	1. ____	2. ____	3. ____
j. Marihuana	1. ____	2. ____	3. ____
k. Other (specify) _____	1. ____	2. ____	3. ____

3. What was the total size of your caseload during the past year? _____

4. About what percentage of the offenders in your caseload during the past year were:

- a. ____ % Under 16? b. ____ % 16 to 21? c. ____ % 22 to 34? d. ____ % 35 and over?

5. About what percentage of the offenders in your caseload during the past year were:

- a. ____ % Male? b. ____ % Female?

6. About what percentage of adults (18 years and above) in your caseload:

- a. ____ % Did not finish high school? b. ____ % Obtained a high school diploma? c. ____ % Had some college?

7. About what percentage of offenders in your caseload during the past year:

- a. ____ % Were apprehended for marihuana possession (use)?
b. ____ % Were apprehended for marihuana sale?
c. ____ % Were involved in cases where marihuana use or sale was identified during investigation of their non-drug offenses?
d. ____ % Have attributed their non-drug offenses to their use of marihuana?
e. ____ % Do you think are regular users of marihuana?

SECTION II - YOUR PROFESSIONAL OPINION

As you know, there has been considerable debate about the relationship between marihuana use and other antisocial behavior, crime and delinquency. In light of your own professional experience, how do you assess the following statements?

1. Most aggressive acts or crimes of violence committed by persons who are known users of marihuana occur when:
(Check ONE for EACH statement)

	<u>Probably True</u>	<u>Probably Not True</u>	<u>Not Sure</u>
a. The offender is under the influence of marihuana.	1. ____	2. ____	3. ____
b. The offender is <u>not</u> under the influence of marihuana but is attempting to obtain marihuana or the money to buy it.	1. ____	2. ____	3. ____

2. Most non-drug offenses (i.e., rape, robbery, burglary, larceny, etc.) committed by persons who are known users of marihuana or are found to have marihuana on their person or in their possession occur when: (Check ONE for EACH statement)

	Probably True	Probably Not True	Not Sure
a. The offender is under the influence of marihuana.	1.____	2.____	3.____
b. The offender is <u>not</u> under the influence of marihuana but is attempting to obtain marihuana or the money to buy it.	1.____	2.____	3.____

3. Aspin concerning the possible relationship between marihuana use and other criminal or delinquent behavior, check ONE of the following statements which comes closest to your own professional experience:

1. ____ Use of marihuana causes or leads to antisocial behavior in the sense that it leads one to commit other criminal or delinquent acts.
2. ____ Involvement in a criminal or delinquent subculture causes or leads to the use of marihuana.
3. ____ There is a statistical relationship or association between marihuana use and other criminal or delinquent behavior, but it is not a cause-effect relationship.
4. ____ There is absolutely no relationship between marihuana use and other criminal or delinquent behavior.

4. Recently there has been considerable discussion about the persons who use marihuana in this country. In light of your professional experience, do you think that almost all, most, some, or just a few of the people who regularly use marihuana: (Check ONE for EACH statement)

	All	Most	Some	Few	None	Don't Know
a. Go on to use heroin?	1.____	2.____	3.____	4.____	5.____	6.____
b. Are showing their rebellion against society?	1.____	2.____	3.____	4.____	5.____	6.____
c. Are lower class, minority group youth?	1.____	2.____	3.____	4.____	5.____	6.____
d. Are college students?	1.____	2.____	3.____	4.____	5.____	6.____
e. Are irresponsible adults?	1.____	2.____	3.____	4.____	5.____	6.____
f. Are unmotivated to either work or study?	1.____	2.____	3.____	4.____	5.____	6.____
g. Do it only because their friends do and they don't want to be left out of the crowd?	1.____	2.____	3.____	4.____	5.____	6.____
h. Are adults in professions such as teaching, law, and medicine?	1.____	2.____	3.____	4.____	5.____	6.____
i. Are hippies?	1.____	2.____	3.____	4.____	5.____	6.____
j. Are white, middle class youth?	1.____	2.____	3.____	4.____	5.____	6.____
k. Are sexually promiscuous?	1.____	2.____	3.____	4.____	5.____	6.____
l. Are psychologically or emotionally maladjusted?	1.____	2.____	3.____	4.____	5.____	6.____
m. Are under 18 years of age?	1.____	2.____	3.____	4.____	5.____	6.____
n. Have little will-power or self-control?	1.____	2.____	3.____	4.____	5.____	6.____
o. Are physically addicted to marihuana?	1.____	2.____	3.____	4.____	5.____	6.____

SECTION III - YOUR OPINIONS ABOUT CONTROL

1. In your opinion, which one of the following would be the most appropriate way for society to deal with youths and adults who are users of marihuana? (Check ONE statement for Youths and ONE statement for Adults).

	a. Youths	b. Adults
Every person should be allowed to decide for himself	1.____	1.____
Family, friends or some professional (e.g., physician, clergyman, psychologist, etc.) should try to convince him to give it up or refer him to a community-based education, counseling or rehabilitation program	2.____	2.____
Require medical or psychiatric care or treatment under civil commitment statutes	3.____	3.____
Arrest, convict and sentence him for violation of the criminal law	4.____	4.____
Other (specify) _____	5.____	5.____

2. In general, do you think that the criminal penalties for possessing and selling marihuana should: (Check ONE statement for Possession (use) and ONE statement for Sale)

Be abolished?

Be made more lenient?

Be kept about the same?

Be made more severe?

a. Possession

b. Sale

1.____

1.____

2.____

2.____

3.____

3.____

4.____

4.____

3. Disregarding the present laws of your state, what kind of sentence would you give to an adult caught possessing (using) marihuana? How about an adult selling to another adult? How about an adult selling to a minor? (Check ONE statement for EACH of the THREE situations)

None

Civil commitment to a treatment program

Fine or probation

Court referral to a community-based education, counseling or rehabilitation program

Imprisonment for less than one year

Imprisonment for 1 to 5 years

Imprisonment for 6 to 10 years

Imprisonment for 11 to 20 years

Imprisonment for 21 years to life

Death

Other (specify) _____

a. Adult Possessing

b. Adult Selling to:
Adult c. Minor

1.____

1.____

1.____

2.____

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4.____

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4.____

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11.____

11.____

4. Disregarding the present laws of your state, what kind of sentence would you give to a minor caught possessing (using) or a minor selling marihuana? (Check ONE statement for EACH of the TWO situations)

None

Civil commitment to a treatment program

Fine or probation

Court referral to a community-based education, counseling or rehabilitation program

Imprisonment for less than one year

Imprisonment for 1 to 5 years

Imprisonment for 6 to 10 years

Imprisonment for 11 to 20 years

Imprisonment for 21 years to life

Death

Other (specify) _____

Minor found:
a. Possessing b. Selling

1.____

1.____

2.____

2.____

3.____

3.____

4.____

4.____

5.____

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11.____

5. Some people have suggested that the legal and social consequences of a criminal record (e.g., possible loss of voting rights, disqualification from positions of public trust, denial of right to practice medicine or law, etc.) raise serious questions about the wisdom of treating marihuana possession (use) as a crime. In light of these considerations, would you favor:

1. ____ A permanent criminal record as a result of either arrest or conviction?

2. ____ A criminal record resulting from either arrest or conviction with expungement of the record contingent upon completion of a rehabilitation program or for possession of less than 10 grams of marihuana?

3. ____ Treatment or attention (voluntary, involuntary, or both) instead of the criminal justice system entirely?

SECTION IV - DRUG EDUCATION

1. Some people have suggested that drug education programs would constitute an effective way to prevent or control the use of drugs by young people. How effective do you think such drug education programs might be in: (Check ONE for EACH statement)

a. Preventing the potential user from starting?

b. Deterring a user from further use?

c. Informing people about the legal, social and medical consequences of drug use?

Very Effective Somewhat Effective Somewhat Ineffective Very Ineffective

1.____

2.____

3.____

4.____

1.____

2.____

3.____

4.____

1.____

2.____

3.____

4.____

SECTION V - YOUR BACKGROUND AND PRESENT POSITION

Name _____

Address _____

1. Sex: 1. ☐ Male 2. ☐ Female

2. Age: 1. ☐ Below 25 2. ☐ 25-34 3. ☐ 35-44 4. ☐ 45-55 5. ☐ Over 55

3. Number of years affiliated with the courts (include any court affiliation prior to your present position)

1. ☐ Under 2 years 2. ☐ 2-5 years 3. ☐ 6-10 years 4. ☐ Over 10 years

4. How large a population do you serve?

1. ☐ Under 1,000 4. ☐ 5,000 - 9,999 7. ☐ 50,000 - 99,999 10. ☐ 500,000 - 1,000,000

2. ☐ 1,000 - 2,499 5. ☐ 10,000 - 24,999 8. ☐ 100,000 - 249,999 11. ☐ Over 1,000,000

3. ☐ 2,500 - 4,999 6. ☐ 25,000 - 49,999 9. ☐ 250,000 - 499,999

5. How would you characterize the jurisdiction you serve?

1. ☐ Primarily urban 2. ☐ Primarily rural 3. ☐ Mixed

6. In what region of the United States is your jurisdiction located?

1. ☐ New England 3. ☐ South 5. ☐ Midwest

2. ☐ Middle Atlantic 4. ☐ Southwest 6. ☐ Far West

7. Does your jurisdiction include a college community? 1. ☐ Yes 2. ☐ No

If yes, what is the approximate student population? _____

Additional Comments _____

part five national survey

I. A Nationwide Study of Beliefs, Information and Experiences

The National Survey was undertaken at the request of the Commission in order to provide a current data base from which policy-relevant information could be gathered. The survey involved a national cross section of adults and youth who were interviewed about their own experiences with marihuana and about their more general opinions and attitudes regarding the use and control of marihuana and other drugs. The Survey consists of four parts. Parts 1 and 3 are included here. Part 2, which is entirely made up of tables, will not be published at this time. Part 4 is a magnetic tape record of the data.

The Commission believes that this research constitutes one of the most comprehensive and accurate assessments yet undertaken of the public's opinion about and experience with marihuana and other drugs. The information developed in this research has served as a policy planning tool in the deliberations of the Commission and we anticipate that it will also serve the community of scholars and laymen to understand more effectively the complex issue of marihuana and other drug use.

PUBLIC ATTITUDES TOWARD MARIHUANA

Part 1

Main Report

**Herbert Abelson
Reuben Cohen
Diane Schroyer**

A Nationwide Study of Beliefs, Information and Experience

Prepared for the

National Commission on Marihuana and Drug Abuse

**Response Analysis Corporation
Princeton, New Jersey
January, 1972**

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INTRODUCTION

Objectives

This study is intended to assist the Commission in arriving at policy recommendations about the positioning of marihuana in our society, a task which obviously requires a variety of inputs in addition to the social research described here.*

Policy recommendations on an issue are made and implemented in both a political and a social climate. This report describes the social climate of belief and behavior in this country regarding marihuana. In addition, the study casts light on the current state of public attitudes towards and understanding of marihuana by examining the variables that appear to contribute most to the ways that belief and behavior have developed to what they are today.

To paraphrase our proposal of June 1971, here are the three main objectives of the research:

- To assess -- comprehensively and exhaustively -- public attitudes, feelings and beliefs with respect to the availability, distribution, consumption, effects, and control of marihuana and selected other substances.
- To determine something about the kind and extent of knowledge of these issues.
- To relate attitudes, belief, and behavior to an array of likely explanatory variables, including those which are naturalistic (e.g., demography) and those which are part of the value structure of members of the public.

*Of the alternative ways of spelling "marihuana" we have observed the spelling used in the name of the Commission.

Research plan

Assembling and developing issues and hypotheses, constructing and pretesting questioning instruments, and preparing an interviewer's manual occupied a ten week period starting late in June.

This phase was substantially helped by the opportunity to meet several times with Commission staff and with consultants whose own research experience helped to shape the present study.

Two other activities marked the developmental period: one was a review of literature on marihuana, including questionnaires and reports from other drug-related studies. The other activity was conducting and analyzing two group interviews, one with working class adults, one with young adults, age 18-25.

The developmental work was the prelude to constructing and formatting questioning instruments, pretesting those instruments (in New Jersey, Philadelphia, and Detroit), preparing and training interviewers for this assignment, and in completing the main part of the research -- quantifiable interviews and an analysis of them.

Sampling and interviewing

The study design called for data from a nationwide probability sample of adults, and a sample of young people age 12-17. The experience for adults consisted of both a face-to-face interview and the completion of a self-administered questionnaire. The experience for the sample age 12-17 consisted of completion of a self-administered questionnaire. Interviewers were in the room with respondents when the questionnaires were being filled out.

The study design called for three activities:

- The interviews plus questionnaires with 2,000 adults age 18 and older.
- The questionnaires with 400 - 500 young people age 12-17.

These two activities constitute the basis for this report.

- Enough additional interviews and questionnaires with adults in three specified areas to provide a sample of 200 adults each in the District of Columbia; Cook County, Illinois; and Omaha, Nebraska. Data from these subsamples are reported separately in connection with another Commission project.

However, some of the District of Columbia and Cook County interviews, beyond what was gathered for the basic study, are included in the tabulations for this report, and appropriately weighted to reflect their importance in the population.

Actually utilized in this report: data from 2,405 adults and 781 youth age 12-17.

Interviews were conducted during September and October 1971.

Eligibility for interview. Because of the importance of young adults to this study, and because of the disproportionately high number of older people in the population, some adjustments were made in the sample design. The 18-34 age group was oversampled, and the 35 and older age group was undersampled. Details of design are in Part 3, which is a separately bound volume.

The sample of young people age 12-17 includes one from any household where there was also an eligible adult (eligibility defined as above) and one from other households where there was no eligible adult. Thus in some households, data was collected from two persons (one an adult, one a young person age 12-17). In other households, data was collected from one person, either an adult or someone age 12-17.

Interview forms

Three different data collection instruments were used in the study:

- A face-to-face structured interview for adults.
- A self-administered questionnaire for those same adults to complete following the interview.
- A self-administered questionnaire for collecting the data from the youth sample.

An elaborate strategem was used to insure respondents the maximum opportunity for anonymity and privacy of response. Self-administered questionnaires were part of that procedure. The rest was in the way that the instruments were administered, returned, and processed.

The separately bound Methods and Procedures document (Part 3 of this report) provides detailed descriptions of how the work was done.

Report organization

This report is in four separate parts:

- Part 1. This is what you are reading now. It presents main findings and conclusions, with a minimum of methodology.
- Part 2. Detailed tabulations. Complete computer print-outs, with appropriate text bound into a document of this page size.
- Part 3. Methods and procedures. An account of all aspects of the interviewing experience, and evaluation of that experience. Other aspects of the study are also included, such as sample design, and construction of analysis variables.
- Part 4. A magnetic tape record of the data.

FINDINGS IN BRIEF

Highlights

Experience with marihuana and other substances

1. Among adults, age 18 and older, 15% report using marihuana at some time. The comparable figure for youth, age 12-17, is 14%. In terms of present users, 5% of adults and 6% of the 12-17 age group classify themselves in this way.
2. Highest experience levels: 39% of young adults, 18-25; 44% of college students. Rapid falloff in reported usage after age 25.

Men report more experience than women with marihuana; races about the same; Jews more than other religious groups; single or divorced more than married or widowed; cities more than rural areas; people living in the South much less than residents of other regions.
3. Further examining those people who have had experience with marihuana, 41% of experienced adults and 45% of the 12-17 group are no longer using it; of present users, 3% of adults and 5% of youth report usage one or more times a day, other users less often.
4. The marihuana milieu is a social one. First use of marihuana is remembered as having these characteristics: substance primarily a gift, from a friend, in the company of other people. The activity is spontaneous rather than planned. Most often, first use is remembered as motivated by curiosity and novelty.
5. The biggest single reason for terminating usage (among those who have terminated) is loss of interest. Twice the proportion of adults report this motive for quitting as report the next most compelling motive, concern about legal status of the substance.
6. There are relatively small differences between adults with and adults without marihuana experience in terms of drugs they have taken for health reasons.

There are very large differences between adults with and adults without marihuana experience in terms of other substances taken out of curiosity or pleasure. Adults with marihuana experience are much more likely than others to have tried or used hashish and stimulants (e.g., "ups") -- and other drugs, but to a lesser extent -- for curiosity or pleasure. Relatively little heroin use reported by marihuana users.

7. The most marked relationships in consumption are between marihuana and two commonly available substances: cigarettes and alcoholic beverages. Both of these substances go with experience with marihuana.

Drugs positioned among other issues

8. A majority of adults mention the economy (e.g., high cost of living, unemployment, taxes) as a serious problem in the country today (Fall of 1971).

Vietnam and drugs are next in order of importance, but neither named by a majority of all adults.

9. Since early 1970 (time of comparable measurement) both the economy and drugs have become much more pressing public issues.
10. Concern about drugs is not expressed with much variety or richness of comment. The main thing said about drugs is that they are available. Less than half a percent of adults, for example, spontaneously call for any revision in the drug laws (although this proportion increases greatly when people are asked direct questions about the laws).

Beliefs about marihuana

11. Heroin and LSD are seen as the most harmful substances of those asked about. Next on the scale are marihuana, amphetamines, and methamphetamines. Young adults (age 18-25) appear to be a little better informed than are older people.
12. In terms of addictiveness, heroin is regarded as the most, and marihuana as the least addictive of four selected substances, with alcohol and tobacco falling between the other two.

13. The most widely held belief about marihuana among adults or young people age 12-17 is that it leads to trying stronger things like heroin. Our data on consumption support this belief, in that marihuana users also use other drugs. But the consumption data also show that heroin is the least likely of other exotic drugs to be used by marihuana users.
14. Other widely held beliefs are that marihuana is morally offensive, that it makes people lose their desire to work, and that many crimes are committed under its influence.

Examination of other data suggest that these expressions of belief may be reflections of a generalized attitude towards marihuana among most adults, rather than a separately considered judgment about each belief statement in the interview.

15. The young adults (age 18-25) have a somewhat different belief pattern than do older people. For example, the belief statement which more of this group agree with than any other is that marihuana increases the enjoyment of music and art.
16. Perhaps of most consequence about these beliefs is the high degree of uncertainty among adults and youth (12-17) about which of the beliefs are valid, and which are not valid. Lack of certainty is particularly evident in the data for youth.
17. Alcohol and marihuana are perceived quite differently, although there is no pattern of believing good things about alcohol and bad things about marihuana. Marihuana users seem to see marihuana and alcohol as roughly interchangeable. Alcohol users, however, do not see the two as interchangeable.
18. One of several problems posed: how to react to the discovery that your own teenage child was using marihuana. The modal response of adults is to discourage but not forbid. Young adults (18-25) would typically either discourage or rely on a discussion of pros and cons to produce acceptable future behavior.
19. Adults have a mental picture of the marihuana user as someone who has dropped out of society: bored with life, 61%; does not care much about the world around him, 55%; does not show good judgment in selecting friends, 51%; etc.

Adults who themselves use marihuana have a different image. For them, the user is a normal person, possibly a bit more sociable than others, and very much a part of the world around him: likes to be with other people, 67%; interested in the world around him, 65%; enjoys life, 50%; etc.

Knowledge of and beliefs about the laws

20. Nearly everyone thinks that selling marihuana is illegal, and almost as high a proportion believe that possession is illegal. However, 14% of the young people age 12-17 do not think that possession is illegal.
21. There is more certainty about what it is that is illegal, than about where these laws come from. About two-thirds of adults think that there are federal laws regarding marihuana, and about three-fourths think that their own state has such laws.
22. Twelve arguments for and against the wider availability of marihuana are nearly all agreed to by substantial proportions of adults. Because of the complexity of the subject matter and the state of uncertainty about marihuana apparent throughout the data, it seems quite reasonable that the same person might simultaneously believe that:
 - Because of marihuana young people who are not criminals are getting police records (83%)
 - Laws against marihuana are very hard to enforce because most people use it in private (76%)
 - There are already too many ways for people to escape their responsibilities. We don't need another one (75%)
 - Stiffer penalties would discourage people from using it (60%)

In general, the data from all 12 of the beliefs suggest an unsettled state of opinion in this area.

23. The youth sample was asked to react to four of the 12 arguments for and against availability. The two arguments which a majority of young people (12-17) agree with are: (1) because of marihuana young people who are not criminals are getting criminal records (73%); and (2) that each person should decide for himself [about using marihuana] (53%).
24. When provided with alternative ways for society to handle the marihuana issue, a majority of adults (52%) favor a nonlegal approach. The views of young people, age 12-17, is much like those of adults. The young people also exhibit less certainty about their opinions.

25. Staying within the legal framework, a large proportion of adults believe that first offense for possession should not be penalized with incarceration, regardless of whether the person in question is teenage or adult.

However, there is substantial feeling that some incarceration is appropriate for multiple offenders.

The most punitive alternative -- over a year in jail for an adult with previous convictions -- is subscribed to by 32% of adults.

26. The sale of marihuana is regarded as far more objectionable than its possession. This feeling is characteristic of all age levels, but is especially marked among adults.

Strategies of control

27. The research tested five futures for marihuana, each future described in detail, and all futures reviewed before interviewing on any of them.

Overall, the public divides into two segments: a larger segment which opts for stricter laws rather than keeping laws as they are now; and a smaller segment which favors availability of some kind, mostly through regulation of product quality and circumstances of sale.

28. Least favored is a commercial model which would include brand names and advertising.
29. There is more favor for availability with regulation than for possession only for personal use (with sale in quantity still penalized).

Information sources

30. Of all likely information sources about marihuana, adults and youth age 12-17 prefer school over any of the others. There is also substantial mention of the family doctor, the home, and mass media (television and newspapers).
31. Adults who have used marihuana report an earlier awareness of it and curiosity about it than adults with no marihuana experience.

Discussion

In this section we go beyond the literal findings to offer a few interpretations of the data. We assume that our views are among several inputs, from a variety of disciplines, that are available to the Commission.

As is the case with studies of social issues, the data do not speak for themselves. The reader may find it useful to compare our observations with his own impressions of the findings.

1. Marihuana as an age-related phenomenon.

If there is such a thing as a generation gap, it is to be found in these pages. We have rarely observed the magnitude of differences in feelings, beliefs, and behavior that show up time and again in comparing young adults (or older teenagers) with older adults on a variety of marihuana related issues. Present law enforcement activities -- as we have measured them here -- seem to be particularly related to divisiveness.

A study at one point in time, such as this one, has no way of confidently predicting whether marihuana is an enduring phenomenon of society, or a passing mark of these times. The amount of interest in it and experience with it that are found among older people begin to suggest that marihuana may be with us in the future.

2. Beliefs about marihuana do not exist in isolation.

Feelings about marihuana are part of a more general value structure. Adults who would like to prohibit freedom of expression on such matters as the government, the police, and God, are much more likely than other people to favor stricter laws and heavier penalties for possession of marihuana.

Adults who regard the antics and activities of today's youth with tolerance are also likely to have more accepting attitudes towards the use of marihuana.

Thus, in interpreting data from any one or a series of questions, it is useful to look for other clues to why people have expressed themselves as they do.

3. Nor is marihuana usage an isolated activity.

This study simply adds confirmation -- and empirical precision -- to other published materials. That is, that marihuana experience most often exists in a social context, where the presence of others is important, not just coincident to the experience.

People who try marihuana for kicks are also likely to try other substances for kicks. Marihuana usage is also related to smoking cigarettes and drinking beer, wine and liquor.

4. Marihuana may be more important as an issue than as a substance.

There is no question about the seriousness of the drug problem in this country. This study is not equipped to evaluate the long term consequences of marihuana.

However, there is an observable disparity in our data between the concept of marihuana and the result of experience with it. Adults who have tried marihuana (and younger people, too) do not find it such a big deal. The typical behavior pattern is to try it, and find that one loses interest in it. Of triers who have become users by their own definition, usage is far more likely to be occasional than steady, and infrequent rather than frequent.

Whether they would change their minds under other circumstances we do not know, but the largest part of the population now believes that marihuana is not for them, even if it were to become legal and available.

5. Uncertainty and inconsistency of response.

The unsettled state of public feeling about marihuana is remarkable. In terms of uncertainty, there is much evidence that young people particularly -- those 12 to 17 years old in our study -- do not know what to believe. The same pattern obtains for adults, but to a lesser extent.

Among adults there is a different situation. There is more of a tendency to express a point of view, but to be somewhat inconsistent about that point of view from issue to issue. For example, substantial agreement that marihuana laws are hard to enforce; but that stricter laws are needed; and yet, every person should decide for himself. And at the beginning of the interview when people name drugs as a serious problem are asked for elaboration, almost no one calls for changes in the laws.

A majority of adults prefer a nonlegal alternative to handling marihuana, yet most adults would impose some kind of penalty for possession (although the penalty would be short of incarceration for first offenders).

These seeming inconsistencies and others suggest that some people simultaneously hold contradictory beliefs (although many may be able to reconcile these contradictions, at least in part).

We think that much of the population (those who are motivated to know more) could benefit by some clarification of what to believe, and that it is possible to bring about some change in their feelings. We are less certain about whether the current state of knowledge can permit clear statements and clear guidance of the kind needed. Our data seem to show that whatever the available mass media and other information has been, it probably has been somewhat unclear, or at crosspurposes, or laboring under the same circumstances as the public: lack of definition and direction.

FINDINGS IN DETAIL

- 1. Attitudes Towards Marihuana**
- 2. Possession and Sale of Marihuana:
Issues Affecting Availability**
- 3. Strategies of Control**
- 4. Experience with Marihuana**
- 5. Information and Communication**

A note on the data for the report.

The findings in the report are from two different ways of treating the data.

1. Most prominent throughout is the use of population characteristics and other behavioral indicators as descriptive variables and as a way of reaching for greater understanding of the state of mind of the population.

For example, we repeatedly call attention to the relationship between age and beliefs and feelings about marihuana.

We know that when we compare differences among age groups, that these differences are often not a function of age alone. For example, younger people tend to have had more formal education than their elders, and tend also to have more direct experience with marihuana than do older people. Findings based on age (or any variable) may actually reflect a compound of influences, and not just be traceable to age alone.

Nevertheless, the reality is that younger people may feel one way and older people another way, regardless of the influences that underlie the feeling.

2. However, although age may look like a key variable to relate to attitude, would it still look that way if we could remove the effect of other influences which might be related to age, such as the fact that there is a higher proportion of college educated people among the younger adults than among the older adults?

For data in Chapters 1 and 2, we used a regression analysis to estimate the independent influence of each of several variables (age, sex, educational level, region of the country, population density, and media exposure) on selected attitudes and beliefs. Where appropriate, we interpret the findings from that analysis.

For Chapter 3 data the same end was achieved with a discriminant analysis which provides a sense of the separate contribution to attitudes of the characteristics just noted.

For interested readers, the data from these analyses is included in Part 2, Detailed Tabulations, separately bound from this report.

Chapter 1

Attitudes Towards Marihuana

- a. The extent of concern over drugs, compared with other social issues
- b. An overview of feelings towards marihuana and other substances
- c. Beliefs about and attitudes toward marihuana and marihuana usage

Notes: There are data for some questions for both the youth sample (age 12-17) and for adults. Other data are from questions asked only of adults.

Tables are keyed to the source questions. The three questioning instruments are identified along with the question numbers:

AI	Adult interview
AQ	Adult questionnaire (self-administered)
Y	Youth self-administered

1. PEOPLE REGARD THE ECONOMY, THE WAR IN VIETNAM, AND DRUGS, AS THE THREE MOST PRESSING PROBLEMS OF THE DAY.

Adults were asked to name two or three problems facing the country that are serious and need attention, and then were asked to identify the one most serious problem.

The data on the next page are shown for each problem area. For example, 59% of adults mention one or more problems related to the economy.

Notice that drugs are third on the list of serious problems (first column opposite). Drugs are also third on the list of most serious problems. And as a most serious problem, about the same proportion of people name drugs as name either the economy or Vietnam.

A shift in public priorities over the past year is evident from comparing data from this study with data from a comparable sample of the population who were interviewed during the first three months of 1970.*

	<u>1971</u>	<u>1970</u>	<u>Points differ- ence</u>
Number of adults	2405	2486	
Problem areas:			
Economy	59%	32%	27
International (Vietnam)	46	54	- 8
Drugs	44	20	24
Crime	29	20	9
Race	28	36	- 8
Youth	22	23	- 1

Concern about drugs and concern about the economy have both risen markedly since the spring of 1970. There have been small decreases in spontaneously expressed concern over Vietnam and race.

Overall, there appears to have been an increase in the proportions of serious problems named by the adult population.

*Technical Report of the Commission on Obscenity and Pornography. Volume VI., p.51, Washington, D. C.: Government Printing Office, 1971.

Local and national problems that need attention. (Q1,2,3 AI)
(Problem areas)

Number of people	<u>All adults</u> (2405)	
	<u>Serious</u>	<u>The one most serious</u>
Problem area:		
Economy	59%	22%
International (Vietnam)	46	20
Drugs	44	18
Problems of modern living	40	5
Climate of country	27	10
Crime and law enforcement	29	8
Race	28	9
Youth	22	2
Education	15	2

(Main mentions)

There are some differences within population groups in selecting drugs as our one most serious problem.

	<u>Drugs the most serious problem</u>
Men (1034)	13%
Women (1363)	22%
Age 18-25 (741)	12%
26-34 (659)	15%
35-49 (457)	17%
50+ (548)	22%
Less than high school graduate (666)	20%
High school graduate (836)	19%
At least some college (745)	13%
Northeast (417)	22%
North Central (756)	16%
South (868)	19%
West (364)	11%

Notes: Figures in parentheses after each subgroup are actual numbers of people in each subgroup. Example of how to read table: 13% of men and 22% of women name drugs as the one most serious problem.

Young adults are concerned about most issues to about the same extent as older people. (Table next page.)

We regard this finding as important because in the rest of this report, on matters related to marihuana, there are very marked differences between young adults and others.

Two issues with notable differences between young adults and others:

Vietnam	43% all adults	55% young adults
Pollution	19% all adults	33% young adults

In other areas the differences are not nearly as large between age groups.

Turning to concerns about drugs, we find that people do not express themselves with nearly the variety and richness of response that they do when talking of other social issues. The main thing said about drugs is that drugs are available. Much smaller proportions of people talk in specifics, such as cracking down on the drug sellers, which is a variant of availability, but at least in particular terms.*

We call this point to the reader's attention because it is consonant with other findings in this report on attitudes toward marihuana. There is a sense of the unsettled state of attitudes in the drug area, marked by logical inconsistencies, and considerable uncertainty (e.g., "not sure" or "no opinion" responses) especially among some age groups.

*To compare with the size of response on drugs, 4% of adults regard alcohol or alcoholism as a serious problem.

Local and national problems that need attention. (Q1,2,3 AI)

	Need attention	
	All adults	Age 18-25
	2405	741
<u>Mentions in each problem area</u>		
	%	%
Economy		
High cost of living	21	20
Unemployment	18	18
Taxes	14	7
Poverty and welfare	10	15
International		
Vietnam	43	55
Drugs		
Drugs (nonspecific)	22	17
Availability	17	15
Crack down on sellers (users)	4	5
Problems of modern living		
Pollution and the environment	19	33
Transportation	12	11
Crowding	11	14
Climate of country		
Mistrust of government	12	12
General decline in morals	9	4
Lack of understanding/sympathy	6	6
Crime and law enforcement		
Threats to personal safety	17	14
Police cannot do their job	5	2
Race		
Race problems (general)	14	15
Busing	7	6
Too much discrimination	6	9
Youth		
Recreational facilities	6	9
Decline of traditional values	5	2
Criticism of behavior	4	2
Education		
Schools or education inadequate	12	12

Illustrative comments by respondents who mention drugs as a problem which needs attention:

Availability and widespread use (17%)*

Kids on dope. Problem seems worse now. Our town is growing and the problem of drugs is growing. Outsiders bringing it in.

There is more dope passed through here per capita than any city in the West. The police call it the "Marihuana capitol of the Northwest."

Young people's psychological well being is being seriously damaged. Too available to those who should not have it.

Drugs . . . it involves every age bracket and is getting out of hand . . . so many people are affected. Even elementary school kids are using it.

Drug problem -- my teenagers tell me 75% have experimented with drugs.

Crack down on sellers and users (4%)

Dope . . . they should be stricter on those caught selling it.

Drugs . . . I don't think the punishment for selling them is severe enough.

Drugs -- laws not enforced -- police not upheld. Better enforcement with police and courts don't support police. Troops all over the world spreading our youth all over and exposing them to death and drugs.

Leniency of judges on the dope problems.

Related to crime (2%)

Drug culture inspired by organized crime.

Dope -- the hard stuff that ties in with crime. They need more police support.

Crime -- Black Panthers -- brought up on drugs. It costs them so much to get the drugs that they will do almost anything to get the money.

*Proportions coded in this category.

Servicemen are becoming addicted (Less than .5%)*

Increase in drugs -- especially what's happening overseas. Servicemen coming home addicted.

Vietnam -- dope -- it's a shame soldiers go over and get addicted on dope.

Laws need revision (Less than .5%)

Laws on marihuana should be the same as on alcohol.

They ought to change some of the laws. High school kids get picked up for marihuana and get a record for life. More attention should be paid to catching criminals rather than marihuana smokers.

I think "pot" should be legalized and the other drug business should be put out of business.

I don't think they should legalize marihuana and I really think there should be a severe penalty for anyone pushing LSD.

***We include this category although some people may not have seen it as a national problem and thus not mentioned it.**

2. MARIHUANA IS PERCEIVED AS BEING ONE OF THE MORE HARMFUL SUBSTANCES.

With the aid of a list, people were asked to identify "drugs, medicines, or other substances" that they had heard of, and then those which they believed to be harmful, "even in small amounts."

Adults regard heroin and LSD as clearly most harmful of all (opposite page). Marihuana is next, in a group that includes amphetamines, speed, and cocaine.

In general, the tendency is to regard as harmful nearly all of the items shown "even in small amounts", with pain relievers such as aspirin at the bottom of the list.

Three substances are perceived differently by young adults than by others:

Harmful:	<u>All adults</u>	<u>Age 18-25</u>	<u>Points difference</u>
Marihuana	77%	61%	16
Methamphetamines	73%	83%	-10
Barbiturates	62%	71%	- 9

Since the 18-25 age group is the most experienced in the use of marihuana among adults (39% have tried at least once), their greater familiarity with it may be responsible for part of the difference.

"Please read through the list and tell me the number of each item that you think can be harmful to people who use them, even in small amounts." (Q10 AI; Q13 Y)

	All adults	Adults by age			
		18-25	26-34	35-49	50+
Number of people	2405	741	659	457	548
Heroin	91%	92%	94%	92%	89%
LSD or mescaline or peyote	89	92	93	93	84
Marihuana	77	61	77	82	81
Amphetamines (pep pills)	74	74	79	78	69
Methamphetamines (speed)	73	83	82	75	62
Cocaine	70	73	67	73	66
Pain killers (such as codeine, morphine)	66	66	67	69	65
Barbiturates (such as Nembutal, Seconal, "downs")	62	71	70	65	52
Tobacco (such as cigarettes, cigars)	60	60	64	58	60
Alcohol	60	58	62	57	62
Tension relievers or tranquilizers (such as Miltown, Librium, Valium)	48	47	52	53	45
Pain relievers (such as aspirin, Bufferin, Excedrin, Anacin, Alka- Seltzer)	32	28	37	35	29
None, no answer	2	1	1	2	4

(Multiple responses)

More education goes with more concern about the harmfulness of drugs and related substances.

All but two of the substances opposite reflect a relationship between perceived harmfulness and amount of formal education. Methamphetamines, barbiturates, and tranquilizers are most differentiated by educational level.

The exceptions to the pattern are marihuana and alcohol. Each of these substances is regarded as more of a potential threat by the lesser educated than by people with greater amount of formal schooling.

To anticipate findings in Chapter 4 on usage, there is more use of hard liquor and of marihuana among college trained people than among other population groups.

With respect to the relationship between experience with marihuana, and opinions about the harmfulness of several substances on the next page, adults who have had experience with marihuana are possibly somewhat more realistic than other adults about the potential danger from the substances on the list.

Adults with marihuana experience are less concerned than other adults about the harmfulness of two substances:

Marihuana	(51% of adults with experience vs. 77% of all adults)
Alcohol	(62% with marihuana experience vs. 60% of all adults)

And adults with marihuana experience are more concerned than other adults about the harmfulness of two substances:

Methamphetamines	(84% with experience vs. 73% of all adults)
Cocaine	(79% with experience vs. 70% of all adults)

Among other conclusions, the data suggest that there is still a job to be done in raising public awareness of the effects of cocaine.

Perceived harmfulness of drugs by educational level.

	<u>Less than high school graduate</u>	<u>High school graduate</u>	<u>College</u>
Number of adults	666	836	745
Heroin	86%	93%	96%
LSD or mescaline or peyote	83	92	94
Marihuana	(83)	(79)	(69)
Amphetamines (pep pills)	67	77	78
Methamphetamines (speed)	61	77	84
Pain killers (such as codeine, morphine)	63	68	69
Barbiturates (such as Nembutal, Seconal, "downs")	51	66	72
Tobacco (such as cigarettes, cigars)	60	60	62
Alcohol	(64)	(59)	(56)
Tension relievers or tranquilizers (such as Miltown, Librium, Valium)	44	49	54
Pain relievers (such as aspirin, Bufferin, Excedrin, Anacin, Alka- Seltzer)	32	31	30

Of four substances asked about, most people regard marihuana as less addictive than the others.

". . . which ones, if any, are addictive; that is, anybody who uses it regularly becomes dependent on it and can't get along without it?" (Q11 AI; Q14 Y)

	<u>Adults</u>	<u>Youth 12-17</u>
Number of people	2405	781
Heroin	92%	85%
Alcohol	74%	69%
Tobacco	70%	58%
Marihuana	65%	48%

Heroin is widely believed to be addictive. About the same proportion of adults think of alcohol and tobacco as addictive. The younger age group (12-17) is less likely than adults to think of either tobacco or marihuana as addictive.

Because of the relatively high proportion naming heroin and relatively low proportion naming marihuana, it is possible that people are reflecting what they have learned from two sources of experience: the media or other information sources for heroin and marihuana, and personal experience for the more common substances.

In contrast with the above data, 40% of adults with marihuana experience regard it as addictive, and 21% of the youth 12-17 with marihuana experience regard it as addictive.

Beliefs about marihuana

Introduction

With published materials, Commission staff, and consultants as prime sources, we assembled a list of belief statements about marihuana. The list was reduced in number by judgment, and further reduced by pretesting for comprehension.

The eleven items that remained were cast into an agree-disagree format and administered to adults and also to the youth sample. The same items, appropriately modified, were administered again to adults, this time with the referent being hard liquor.

The eleven items are listed here in descending order of the proportions of adults who agree with each one. Notice that the first six items turn out to be negatives, the last five are positive or neutral.

- a. It makes people want to try stronger things like heroin.
- b. Using marihuana is morally offensive.
- c. It makes people lose their desire to work.
- d. Many crimes are committed by persons who are under the influence of marihuana.
- e. Some people have died from using it.
- f. It is often promoted by people who are enemies of the United States.
- g. It increases enjoyment of things like music and art.
- h. Marihuana helps to relieve some of the tensions of modern life.
- i. While people are smoking marihuana they tend to become more sociable.
- j. Marihuana increases sexual pleasure.
- k. Most people who use marihuana lead a normal life.

3. THE MOST WIDELY HELD BELIEF ABOUT MARIHUANA IS THAT IT LEADS USERS TO TRY HEROIN.*

A high proportion of all adults agree with this premise. Although there is substantially more consensus on this point among older adults than younger, majorities of adults in each age group have this view. (Table opposite page.)

Support for negative attitudes towards marihuana (items "a" to "f" opposite) comes disproportionately from older adults in the population, who seem to be approving of any of the negative beliefs, and thus may be responding to the items not as individual items but as ways of expressing an overall unfavorable disposition towards marihuana.

All six of the negative beliefs about marihuana are agreed to by over 50% of the oldest age category.

The youngest adults, age 18-25, appear to discriminate among the statements more according to the content of each, rather than by underlying attitude.

There is a range from about a third to over a half of young adults who agree with each of the most widely held negatives about marihuana: leads to heroin, morally offensive, slothfulness, crime.

On the other hand, substantial proportions of the 18-25 year age group believe that marihuana heightens enjoyment of music and art, that it helps relieve tension, that marihuana users live as other people do.

*A belief which is not upheld by our own drug usage data. See Chapter 4.

Extent of agreement with belief-statements about marihuana.
(Q12 AI; Q15 Y)

	All adults	Adults by age			
		18-25	26-34	35-49	50+
	2405	741	659	457	548
<u>Agree</u> that . . .					
a. Marihuana makes people want to try stronger things like heroin	70%	52%	68%	76%	78%
b. Using marihuana is morally offensive	64	45	59	69	73
c. It makes people lose their desire to work	59	46	52	63	66
d. Many crimes are committed by persons who are under the influence of marihuana	56	35	49	59	69
e. Some people have died from using it	48	35	42	56	51
f. It is often promoted by people who are enemies of the United States	45	26	37	46	58
g. It increases enjoyment of things like music and art	45	63	46	42	37
h. Marihuana helps to relieve some of the tensions of modern life	43	50	47	43	37
i. While people are smoking marihuana they tend to become more sociable	39	43	45	38	34
j. Marihuana increases sexual pleasure	24	33	24	19	23
k. Most people who use marihuana lead a normal life	23	49	29	19	9

Roughly the same pattern of beliefs about marihuana obtains for the younger people in the population (12-17 year olds) as for adults, as shown opposite.

Although the patterns may be roughly the same, there are smaller proportions of the youth population who agree with these beliefs as compared with adults.

Anticipating the discussion immediately following, there is much less certainty among the youth sample than among adults about their beliefs (much higher proportion of "not sure" responses among the young people).

The young people who are most like adults in their expressions of belief about these concepts are youngsters 12 and 13 years old. As you compare the pattern of thought among each of the three groups of young people, you can see a decreasing comparability with the total adult sample, and increasing comparability to the young adults, age 18-25, especially on the negative statements.

The reasoning that suggests itself is that the 12 and 13 year olds are still close to home in values as well as physical presence. Moving more into the teen years brings with it the identification with young adult values, and the movement away from the home and into the teen culture as a part of a growing independence of mind.

Extent of agreement with belief statements about marihuana.
(Q12 AI; Q15 Y)

	Adults	Youth 12-17	Youth by age		
			12-13	14-15	16-17
	2405	781	244	283	252
<u>Agree</u> that . . .					
a. Marihuana makes people want to try stronger things like heroin	70%	56%	64%	60%	43%
b. Using marihuana is morally offensive	64%	40	51	42	23
c. It makes people lose their desire to work	59	39	47	39	29
d. Many crimes are comitted by persons who are under the influence of marihuana	56	41	55	35	32
e. Some people have died from using it	48	40	51	42	23
f. It is often promoted by people who are enemies of the United States	45	22	25	27	13
g. It increases enjoyment of things like music and art	45	41	33	41	48
h. Marihuana helps to relieve some of the tensions of modern life	43	32	26	31	39
i. While people are smoking marihuana they tend to become more sociable	39	32	26	33	37
j. Marihuana increases sexual pleasure	24	26	23	28	27
k. Most people who use marihuana lead a normal life	23	26	15	30	35

A substantial degree of uncertainty about what to believe about marihuana is characteristic of teenagers and to a lesser extent, of adults.

Roughly one-third or more of the 12-17 age group say "not sure" to five of the 11 belief statements.

One-fifth or more of adults also react with uncertainty to five of the belief statements.

Data for the young adults (18-25) is included since this group reflects the least amount of uncertainty in their responses to the 11 beliefs.

To provide some perspective, the belief items about marihuana were modified to suit hard liquor ("whiskey, brandy, or gin") and administered to the adults.

Uncertainty about alcoholic beverages is much less than about marihuana, and in fact, the 18-25 age group responds very much like other adults in this respect.

All adults: 2405	<u>Not sure, no opinion</u>	
	<u>Marihuana</u>	<u>Alcohol</u>
Key term in item:		
Sexual pleasure	48%	23%
More sociable	30	4
Music and art	26	13
Some have died	22	4
Less desire to work	22	5
Crimes	18	7
Relieves tensions	17	5
Enemies of United States	17	10
Normal life	12	3
Try heroin	10	10
Morally offensive	10	4

Uncertainty of beliefs about marihuana.

	<u>All adults</u>	<u>Age 18-25</u>	<u>Youth 12-17</u>
	2405	741	781
<u>Not sure that . . .</u>			
a. Marihuana increases sexual pleasure	48%	38%	49%
b. While using, people tend to become more sociable	30	19	35
c. It increases enjoyment of things like music and art	26	15	30
d. Some people have died from using it	22	13	25
e. It makes people lose their desire to work	22	17	35
f. Many crimes are committed by persons who are under its influence	18	13	25
g. It helps to relieve some of the tensions of modern life	17	11	24
h. It is often promoted by groups who are enemies of the United States	17	14	32
i. Most people who use it lead a normal life	12	6	21
j. It makes people want to try stronger things like heroin	10	6	17
k. Using it is morally offensive	10	7	25

The list of statements about marihuana was readministered to adults with the referent this time being hard liquor ("whiskey, brandy, gin").

Since both marihuana and alcohol are regarded as drugs and mood-altering substances, the intent was to determine the extent to which these two substances share the same attitude domain.

As the opposite table shows, alcohol and marihuana are perceived quite differently in nearly all respects. However, people do not regard either of these substances in a consistently negative or consistently positive way, even though we might expect far more approval of alcohol because it is legal and because people are more familiar with it.

Biggest differences:

- Heroin as a consequence of using marihuana, not alcohol.
- Use by ordinary normal people connects with alcohol far more than with marihuana.
- Sense of certainty (i.e., "agreement") that some people have died from using it, is more associated with alcohol than with marihuana.

Notable proportions of the public regard both substances as:

- Connected to crime committed under the influence.
- Leading to loss of desire to work.

Extent of agreement with beliefs about marihuana and alcohol.
(Q12,13 AI)

<u>Agree that . . .</u>	<u>All adults</u>		<u>Points differ- ence</u>
	<u>Mari- huana</u>	<u>Alco- hol</u>	
It makes people want to try stronger things like heroin	70%	14%	56
Most people who use it lead a normal life	23	66	-43
Some people have died from using it	48	89	-41
It is often promoted by groups who are enemies of the United States	45	13	32
While using, people tend to become more sociable	39	70	-31
Using it is morally offensive	64	40	24
It helps to relieve some of the tensions of modern life	43	64	-21
It increases enjoyment of things like music and art	45	28	17
Many crimes are committed by persons who are under its influence	56	69	-13
It makes people lose their desire to work	59	48	11
It increases sexual pleasure	24	25	- 1

Marihuana users, and regular users of liquor tend to hold about the same beliefs about alcohol.

However, these two groups are quite different in the ways that they regard marihuana, with consumers of liquor more likely to reflect the views of adults in general about marihuana, rather than the views of marihuana users.

It would appear as though marihuana users tend to regard marihuana and alcohol as somewhat interchangeable in their effects.* Alcohol users do not have this same view of the two substances.

Extent of agreement with beliefs about alcohol.

	<u>Use**</u> <u>alcohol</u>	<u>Use</u> <u>marihuana</u>	<u>All</u> <u>adults</u>
Some people have died from using it	92%	92%	90%
Most people who use it lead a normal life	88	85	66
It helps to relieve. . . tensions of modern life	79	78	64
While using it, people tend to be more sociable	77	80	70
Many crimes committed. . . under its influence	55	61	69
It makes people lose their desire to work	33	47	48
It increases enjoyment of . . . music and art	22	22	28
It increases sexual pleasure	21	32	25
Using it is morally offensive	16	13	40
Often promoted by. . . enemies of U.S.	5	7	13
Makes people want to try. . . heroin	4	5	14

*In fact, as documented in Chapter 4, Marihuana users are also more likely to consume alcoholic beverages than are others in the population.

**Consumed liquor (e.g., whiskey, brandy, gin) on four or more days of the last 30.

Here are the data comparable to those just shown, but with attention to beliefs about marihuana.

Extent of agreement with beliefs about marihuana.

	<u>Use marihuana</u>	<u>Use alcohol</u>	<u>All adults</u>
It increases enjoyment of. . . music and art	91%	48%	45%
Most people who use it lead a normal life	86	31	23
It helps to relieve. . . tensions of modern life	80	52	43
While using it, people tend to be more sociable	58	42	39
It increases sexual pleasure	52	21	24
It makes people lose their desire to work	29	53	59
Some people have died from using it	9	39	48
Many crimes committed. . . under its influence	8	42	56
Makes people want to try. . . heroin	7	61	70
Using it is morally offensive	7	50	64
Often promoted by. . . enemies of U. S.	12	32	45

In the table above, notice that the beliefs agreed to by a majority of marihuana users are nearly all related to the experience of usage, the personal effects of consuming marihuana. A little less of the personal effects and more of the generalized beliefs are apparent in the statements agreed to about alcohol by a majority of alcohol consumers (table previous page).

4. WHEN THE USE OF MARIHUANA IS PUT INTO THE CONTEXT OF EVERYDAY CLOSE-TO-HOME SITUATIONS, THE REACTION IS A FAIRLY RECEPTIVE ONE.

For example, respondents were asked how they would react if they happened to learn that a friend was using marihuana.
(Q29 AQ; Q50 Y

	<u>All adults</u>	<u>Adults 18-25</u>	<u>Youth 12-17</u>
	2405	741	781
It would make him/her more interesting to me	1%	1%	2%
It would not change my feelings about him/her	25	49	35
It would make me wonder if there was something wrong with him/her	22	14	17
It would make me want to stop being as friendly with him/her	10	7	14
I would report him/her to the police	7	4	10
Not sure/no answer	43	29	32

(Multiple responses)

As you can see above, about a quarter of adults feel that marihuana would make no difference, and another quarter think they might be puzzled but stop short of any negative feelings. About one adult in five thinks that he would alter his behavior toward his friend, in some instances to the point of getting the police into the situation.

Among young adults and youth, there is more of a tendency to feel that marihuana would have no effect on feelings of friendship.

Some part of the "not sure" or "no answer" response may be attributed to the situation posing some dissonance to the respondent, and some part of the nonresponse is probably because these questions appeared towards the end of the questionnaire when some people began to skip items.

Next situation: if you learn that your own teenager is using marihuana.

On learning that one of their own teenage children was smoking marihuana with friends, about one adult in four would be punitive, about one-third don't know what they would do, and the remainder think they would take some intermediate position between punishment and inaction.

"If you found that one of your 12 to 20 year old children was smoking marihuana with friends, what would you probably do?" (Q31AQ; Q51 Y)

	All adults	Adults 18-25	Youth 12-17	Adults with teenage children
	2405	741	781	398
I would report him/ her to the police	9%	6%	12%	9%
I would punish him/her	14	12	15	20
I would not forbid, but would try to discourage him/her from doing it again	32	27	24	33
I would not discourage, but would simply dis- cuss the pros and cons	15	32	20	7
I would not do anything	1	2	2	0
I don't know what I would do; no answer	35	26	32	35

(Multiple responses)

The modal responses of all adults and of adults with teenage children is to discourage but not forbid. Young adults (18-25) would either discourage or would rely on a discussion of the pros and cons to produce acceptable future behavior.

Next situation: what if a son or daughter were arrested for possession?

"If a youngster of yours, age 12 to 20, was arrested for a marihuana offense, what do you think your reaction might be?" (Q32 AQ; Q52 Y)

	<u>All adults</u>	<u>Adults 18-25</u>	<u>Youth 12-17</u>	<u>Adults with teenage children</u>
	2405	741	781	398
It would be the best way to teach him a lesson	34%	31%	37%	35%
I would be very upset be- cause of the police record that goes with it	33	38	24	35
I would do everything I could to get him off	25	32	39	23
No answer	13	6	5	11

(Multiple responses)

Here a sizable segment feels "it would serve him right" and another sizable segment feels they would do what they could to get the charge taken off the books. This marked division of feeling is reflected by each age group shown in the table.

Apparently this situation may pose a real dilemma. Unlike reactions to other situations and other attitudes, there are no notable differences apparent within most of the population groups. There is a slight tendency for the less well educated and the oldest age group to favor the "serve him right" response.

Image of a marihuana user

As yet another approach to publicly held beliefs and feelings about marihuana, a cafeteria of 24 personal characteristics were assembled and administered to adults who were asked to select from the list as many as appropriate to describe their "mental picture of a marihuana user." (Q14 AI)

The literature on drugs and suggestions of consultants suggested some of the kinds of items to include. About half of the items were positive, and other half negative. Although the items were constructed in pairs, respondents were asked to react to each item separately.

The lists were prepared in three randomized orders, so that each third of adults saw the list in a different order.

Here are the items as they appear on one form of the list:

Tends to be male	Chooses friends the way anyone else does
Tends to be female	
Good record in school	Does not show good judgment in selecting friends
Poor record in school	Is interested in the world around him
Young person	Does not care much about the world around him
Older person	
Likes to be with other people	Drinks a lot of liquor
Tries to avoid other people	Does not drink much liquor
Bored with life	Uses many different drugs for pleasure
Enjoys life	Uses only marihuana for pleasure
Usually an ambitious person	
Usually a lazy person	Not too different from me
A lot of personal problems	Is a lot different from me
Average number of personal problems	

5. THE MARIHUANA USER -- AS IMAGINED BY ADULTS -- IS TYPICALLY A DROPOUT FROM SOCIETY.

A list of 24 personal characteristics were administered to adults, who were asked to select as many as appropriate to describe their "mental picture of a marihuana user" (Q14 AI). About half of the terms were positive, the other half negative.

Here are the characteristics selected by 40% or more of adults:

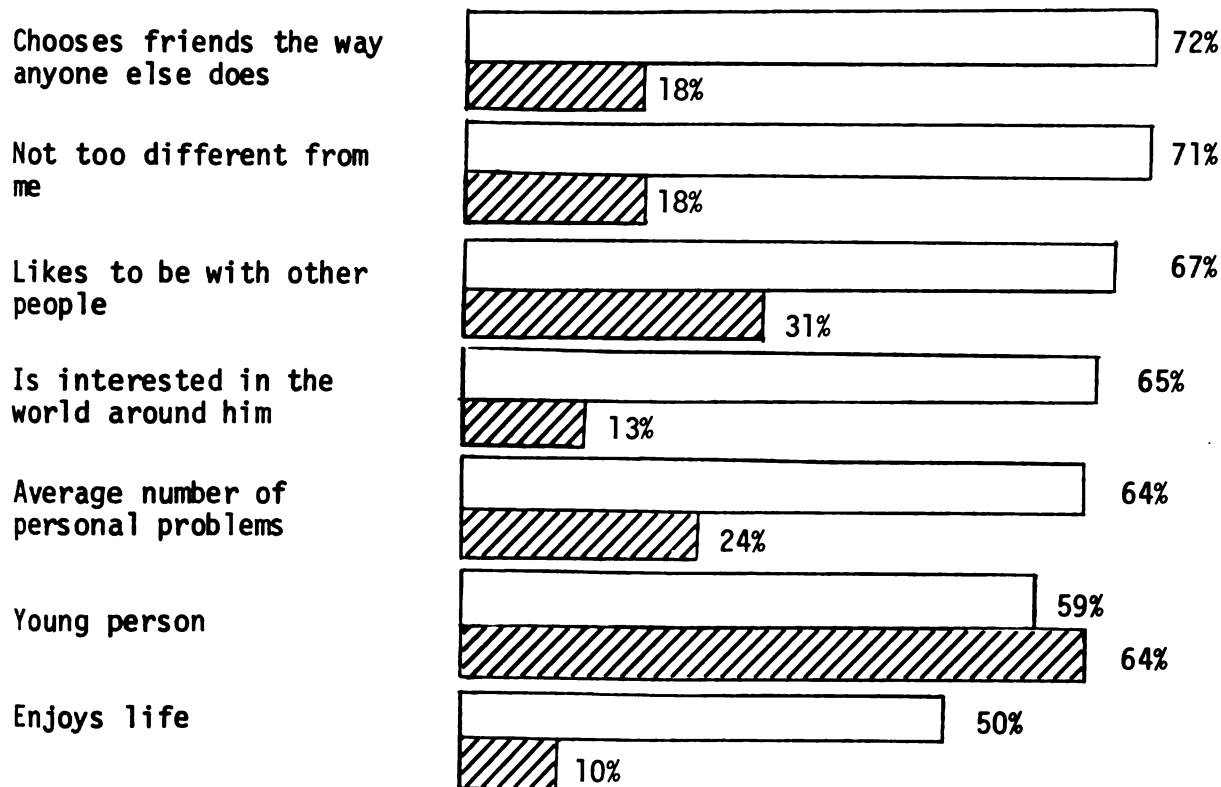
	<u>Selected by:</u>
Young person	64%
Bored with life	61%
Does not care much about the world around him	55%
Does not show good judgment in selecting friends	51%
Is a lot different from me	50%
Poor record in school	45%
A lot of personal problems	44%
Usually a lazy person	43%

Nothing in the question specified amount of usage. Just the image of the user was asked for. It appears that the image held may be what a regular drug user is like, and that marihuana and other drugs were lumped together in respondents' minds.


Incidentally, although sex was available to respondents for describing marihuana users, it was not as prominent a characteristic as these others. When sex is used as a descriptor, males are more often pictured as users than are females (18% to 2%).


As you can see on the next page, adults who are marihuana users have quite a different view of users than do adults in general.

Image of marihuana user by adults who use marihuana, compared with response to same items by all adults.*



*Items shown are those selected by half or more of users.

Users (157) 

All adults (2405) 

An ordinary, perhaps attractive person emerges from the mental picture that users have, quite different from the picture of users held by all adults (previous page).

Apparently there is close to agreement between the two groups above on only the matter of age, where everyone sees the young person as better fitting the user image.

Chapter Summary

1. The economy, Vietnam, and drugs are the three national problems that most need attention. Among all adults, the economy is the only problem that is spontaneously mentioned by a majority. Among the 18-25 age group, both the economy and Vietnam are named by a majority.

At this point in the interview, when marihuana had not yet become the focus of attention, less than one-half of one percent of adults mention the need for a revision of the drug laws. Later on, in different context, there is a much different response.

2. Heroin and LSD are regarded as the two most harmful substances in a list of 12 substances presented to adults. Each of these is identified as harmful by 90% or more of respondents. Marihuana, amphetamines, and methamphetamines are each regarded as harmful by about 75% of adults. Young adults (18-25) are less likely than others to think that marihuana is harmful, and more likely than others to think of methamphetamines and barbiturates as harmful.
3. With respect to addictiveness, out of four substances included in the question, marihuana is seen as least addictive of the four, heroin the most, alcohol and tobacco in between. This ordering by adults also corresponds to the way that youth age 12-17 regard the four substances.
4. The most widely held belief about marihuana, in the minds of adults and of youth, is that it leads to trying stronger drugs like heroin. This belief, incidentally, is not completely supported in other data from this study on experience with a variety of substances (Chapter 4).

Also believed by a majority of all adults: using marihuana is morally offensive, it makes people lose their desire to work, and many crimes are committed under its influence.

The belief pattern is somewhat different among the young adults (18-25). In this group, the most widely held belief is that marihuana increases enjoyment of music and art. A majority of this younger group also believes, as do other adults, that marihuana leads to heroin usage.

The youth population, age 12-17, reflects general agreement with the belief patterns of adults. In examining age differences within the 12-17 year old group, we note that the youngest of the group are more like older adults in their beliefs, and that towards the upper years of the range, feelings and beliefs move much closer to those held by young adults.

Least certain of what they do believe are the youth age 12-17. Most certain of their beliefs are young adults, 18-25. However, all age groups reflect a fairly marked degree of uncertainty about marihuana, its effects and implications.

5. Users of marihuana and users of alcoholic beverages both tend to see alcohol in somewhat the same way as marihuana, which suggests that marihuana users regard the two substances as roughly interchangeable.

However, users of marihuana and users of alcohol do not see marihuana in the same ways. Users of alcohol are more like all adults in their views of marihuana.

6. The image of the marihuana user in the minds of all adults is that of someone who has dropped out of society. These characterizations are prominent: bored with life, does not care much about the world around him, does not show good judgment in choosing friends, is a lot different from me.

The same dropout characteristics are not the way that marihuana users describe the image of a user. Rather, their emphasis suggests more of an ordinary, sociable, pleasant person.

Notes on multiple regression analysis

For this analysis we selected six predictor variables: age, sex, education, race, community size, and region of the country. The analysis provided an estimate of the relative contribution of each of these variables to predicting a selection of the belief statements discussed in this chapter. The variables were also used as predictors against various other criteria, such as freedom of expression index, approval of youth index, and some of the penalty structure described in the next chapter.

It is relatively simple to summarize the outcomes, since they are roughly comparable for each regression: age and education are clearly dominant effects, with other variables sometimes contributing meaningfully to the outcome. The highest observed R is about .4.

Interested readers will find the data for these findings in Part 2, Detailed Tabulations.

Chapter 2

Possession and Sale of Marihuana: Issues Affecting Availability

There are findings in this chapter for three subject areas:

- a. Awareness of what consists of illegal behavior**
- b. Beliefs about the effects on society of changing the laws or of keeping the laws as they are**
- c. Appropriateness of punishment alternatives**

1. THERE IS MORE CERTAINTY ABOUT THE ILLEGALITY OF MARIHUANA THAN ABOUT THE SOURCE OF THE LAWS.

As shown opposite (middle table), nearly everyone thinks that the sale of marihuana is illegal. Nearly as high a proportion of the population believe that possession is a crime.

It is also noteworthy that among the youngest persons, those age 12 to 17, about one in seven do not think that possession is a crime in their state:

Possession against the law?

Youth, age 12-17

80%	Yes
14	No
6	Not Sure

The high degree of consensus about possession and sale being illegal is not matched by an awareness of where the laws come from. As you can see from the top table on the opposite page, about two-thirds of adults think that there are federal anti-marihuana laws, and about three-fourths think that their state has such laws.

"Do you happen to know if the federal government has any laws about marihuana?" (Q15 AI)

"How about this state? Do you happen to know if this state has any laws about marihuana?" (Q16 AI)

All adults (2405)	<u>Yes</u>	<u>No</u>	<u>Not sure</u>
Federal government	67%	9	25
This state	77%	4	19

Opinions of what is illegal in respondent's state. (Q17 AI, Q16 Y)

	<u>All adults (2405)</u>			<u>Young adults** (741)</u>			<u>Youth** (781)</u>		
	<u>Yes</u>	<u>No</u>	<u>Not sure</u>	<u>Yes</u>	<u>No</u>	<u>Not sure</u>	<u>Yes</u>	<u>No</u>	<u>Not sure</u>
What is against law?									
Possession?	94%	1	5	98%	1	1	80%	14	6
Selling it?	97%	*	3	99%	*	1	92%	4	4
Being in same room with smoker?	40%	28	32	57%	24	19	36%	29	35

* Less than .5%

** Young adults - age 18-25

Youth - age 12-17

"Do you think that the marihuana laws in this state are stricter or not as strict as the marihuana laws in most other states?" (Q18 AI, Q17 Y)

	<u>All adults (2405)</u>	<u>Young adults** (741)</u>	<u>Youth** (781)</u>
This state stricter	11%	18%	12%
This state not as strict	18	26	14
This state same	29	32	35
Not sure	42	24	39

** Young adults - age 18-25

Youth - age 12-17

2. REACTIONS TO ARGUMENTS FOR AND ARGUMENTS AGAINST THE WIDER AVAILABILITY OF MARIHUANA SUGGEST AN UNSETTLED STATE OF OPINION IN THIS AREA.

Opposite are twelve arguments, for and against the wider availability of marihuana.

Substantial proportions of adults find nearly every argument, pro and con, as a point of view that they can agree with. In this connection, note also the low proportion of "no opinion": most people have a point of view.

Further observations:

- The response patterns opposite could be regarded as contradictory. For example, a high proportion of adults agree that young people are getting police records, and that the marihuana laws are hard to enforce. But also, a high proportion agree that stiffer penalties would discourage use.

Actually, there may be no inconsistencies in a person agreeing with the four most prominent "agree" items opposite: "a,b,h,i". As noted earlier, the issues are far from clearly drawn, and the data on the next page may reflect the possibility that some of the pros and cons can be simultaneously held.

- Of the 12 arguments, the one which seems the clearest test of sentiment about marihuana is "It should be up to each person to decide for himself." The relatively strong showing, 43% agreement, may reflect in part that the notion of self-determination is an appealing value in our society.

Reactions of adults to selected arguments for making marihuana legal to have and to use. (Q19 AI)

	<u>Mostly agree</u>	<u>Mostly disagree</u>	<u>No opinion</u>
* a. Because of marihuana a lot of young people who are not criminals are getting police records and being put in jail.	(83%)	11	6
b. Laws against marihuana are very hard to enforce because most people use it in private.	(76%)	18	6
* c. It would give the police more time to deal with other things.	52%	40	8
d. Making marihuana legal would cut down the profits to organized crime.	52%	37	11
* e. It should be up to each person to decide for himself, like with alcohol and tobacco.	43%	51	6
* f. Young people would have more respect for the law if marihuana were made legal.	16%	(76)	8
g. So many people are using marihuana that it should be made legal.	15%	(80)	5

* Asked also of youth; see following pages.

Reactions of adults to selected arguments for maintaining marihuana laws as they are, or making these laws stricter than at present. (Q20 AI)

	<u>Mostly agree</u>	<u>Mostly disagree</u>	<u>No opinion</u>
h. There are already too many ways for people to escape from their responsibilities. We don't need another one.	(75%)	19	6
i. The laws against marihuana should have stiffer penalties than they do now because that would discourage people from using it.	(60%)	35	5
j. If marihuana were legal, it would lead to teenagers becoming irresponsible and wild.	57%	36	7
k. Strict marihuana laws help our country to keep its moral leadership in the world.	56%	35	9
l. If marihuana were made legal, it would make drug addicts out of ordinary people.	47%	47	6

Young people were asked for their views on four of the arguments for making marihuana more widely available. The extent of their agreement with adults is shown here:

Comparisons of adults and young people on four arguments related to easing the legal restrictions on marihuana. (Q19 AI, Q18 Y)

	Percent "agree"		Points difference
	Adults (2405)	Youth, 12-17 (781)	
Because of marihuana ... young people who are not criminals are getting police records ...	83	73	10
It would give the police more time to deal with other things ...	52	31	21
It should be up to each person to decide for himself ...	43	53	-10
Young people would have more respect for the law ...	16	20	- 4

In looking for meanings in these differences between the two age groups, we think that the youth group may be more matter of fact and connected to reality, while their elders are more hooked on stereotypes. For example, a majority of adults feel that legalizing marihuana would free the police for other activities. Less than a third of the youth group share this view, and thus, we think may be less subject to the current rhetoric.

The next table reflects another side of the youth-age differences in approach to those pro-marihuana arguments. We think it is consistent with the foregoing discussion to find comparatively higher proportions of the youth sample indicating that they are not sure whether the argument given is a reason for easing up on the marihuana laws.

Comparisons of adults and young people on their lack of certainty about four arguments related to easing legal restrictions on marihuana.

	Percent "no opinion"		Points difference
	Adults (2405)	Youth, 12-17 (781)	
Because of marihuana ... young people who are not criminals are getting police records ...	6	11	- 5
It would give police more time to deal with other things ...	8	20	-12
It should be up to each person to decide for himself ...	6	17	-11
Young people would have more respect for the law ...	8	20	-12

Profiles of population segments on selected arguments.

Four of the 12 beliefs or arguments were selected for further examination. Here they are with the basis for choosing them:

"It would give the police more time to deal with other things."

This is an often used argument of people who feel that society would be better served if marihuana possession were decriminalized or its legal status otherwise modified.

"It should be up to each person to decide for himself, like with alcohol and tobacco."

The argument invokes the value of self-determination, as noted earlier, and also suggests that marihuana may be in the same tradition as substances which are available.

"The laws against marihuana should have stiffer penalties than they do now because that would discourage people from using it."

This statement is an expression of one part of the logic of the law in many areas: the threat of punishment is a deterrent to crime.

"If marihuana were made legal, it would make drug addicts out of ordinary people."

Another belief about marihuana usage that has some currency.

Responses to these items by types of adults are on the next page.

The largest differences within subgroups show up in connection with the stiffer penalties-discourage use concept (see circled figures opposite).

Additional discussion of these data follows.

Proportions of adults who agree with each of four selected arguments about marihuana, shown by subgroups.

	<u>Give police more time</u>	<u>Up to each person</u>	<u>Stiffer penal- ties</u>	<u>Make drug addicts</u>
ALL ADULTS (2405)	52	43	60	47
MARIHUANA USERS (157)	90	93	7	4
SEX				
Men (1034)	58	48	56	43
Women (1363)	47	39	63	50
AGE				
18-25 (741)	68	69	36	30
26-34 (659)	55	46	51	41
35-49 (457)	48	32	64	45
50+ (548)	45	36	74	59
EDUCATION				
Less than high school (666)	45	39	77	63
High school graduate (836)	52	40	64	48
College (745)	60	48	36	25
RACE				
White (2027)	52	42	60	47
Other (304)	52	55	61	43
REGION				
Northeast (417)	58	46	52	42
North Central (756)	53	45	58	44
South (868)	42	36	73	57
West (364)	60	50	50	40
DENSITY				
Large metro (1031)	59	51	51	43
Smaller metro (653)	49	38	58	44
Non-metro (721)	48	41	71	54
*APPROVAL OF YOUTH				
Less (942)	41	30	78	61
More (1463)	62	55	43	33
*FREEDOM OF EXPRESSION				
Less (1170)	44	35	78	61
More (1235)	63	55	37	28

*Full descriptions of the indices, and definitions of other variables are in the Appendix of this report.

Four selected arguments, continued.

- 1 Give police more time for other things
- 2 Each person should decide for himself
- 3 Stiffer penalties would discourage use
- 4 Make drug addicts out of ordinary people

The table on the next page is set up so that the reader can easily see where there is least consensus among population subgroups.

Because the first two columns opposite are for arguments receptive to marihuana, and the last two columns are for arguments prohibitive to marihuana, there tend to be differences in the pattern of plus and minus signs.

Observations:

- a. Large percentage point differences compared with differences observed in other social issues studies for the same types of subgroups.*
- b. Compared with other differences shown, the sexes are fairly close to each other.
- c. As you can see, age group, educational level, and region of the country are the background variables which are most responsive to these arguments. The pattern of receptivity is highest among young adults, with college training, who live in the West.
- d. An approval of youth index based on responses to several questions about the behavior of young people quite apart from drugs, has yielded some very large differences on these questions. Feelings about the drug scene are apparently closely associated with feelings about the behavior of young people in other domains.
- e. Large order of magnitude differences also exist between people who are less vs. more receptive to freedom of expression. This index is based on combined responses to three items: attitudes toward public criticism of the police; toward publishing criticisms of our system of government; and toward public speeches against God.

The more restrictive that people are in terms of these freedom of expression items, the more restrictive they also are towards the availability of marihuana.

*Actually, every difference of 5 points or more shown opposite is "statistically significant" by conventional usage (an event unlikely to occur by chance more often than 5 times in 100 opportunities).

Percentage differences between classes within subgroups of adults on four arguments about marihuana.

	<u>Give police more time</u>	<u>Up to each person</u>	<u>Stiffer penal- ties</u>	<u>Make drug addicts</u>
SEX				
Men - women	11	9	- 7	- 7
AGE				
(18-25) - (50+)	23	(33)	(-38)	-29
EDUCATION				
College - less than high school	8	8	-28	-23
RACE				
White - other	0	-13	- 1	4
REGION				
West - South	18	14	-23	-17
DENSITY				
Large metro - non-metro	11	10	-20	-11
APPROVAL OF YOUTH				
More approving - less approving	21	25	(-35)	-28
FREEDOM OF EXPRESSION*				
More - less	19	20	(-41)	(33)

3. MOST PEOPLE FAVOR SOMETHING OTHER THAN LEGAL PENALTIES FOR HANDLING THE POSSESSION OF MARIHUANA.

Introduction:

Before testing out a number of penalty alternatives for marihuana possession, it seemed desirable to determine the extent to which the public regards legal means as the most desirable instrument for handling marihuana.

"These days, as you may know, large numbers of teenagers, college students, and young adults use marihuana. For the good of the country, which of the following courses of action would be the best thing to do about this situation?" (Q23 AI; Q19 Y)

	Adults (2405)	Youth 12-17 (781)
Handle the problem mostly through the police and courts. The process of arrest, conviction, punishment.	37%	20%
Handle the problem mostly through medical clinics. The process of diagnosis, treatment, cure.	51	48
Don't worry about the use of marihuana, but spend time and money on preventing and solving other crimes.	11	11
No opinion	5	20

(Adults - multiple mentions)

The dominant sentiment in both age categories is away from the legal alternative. Incidentally, in the strategy of the question wording, the third answer alternative was included to siphon off those people who simply do not regard marihuana as much of a problem.

**Views of population subgroups for handling the marihuana situation.
(Q23 AI; Q19 Y)**

(All data for adults except for age breaks under 18.)

	<u>Favored alternative</u>		<u>Points Difference</u>
	<u>Legal</u>	<u>Medical</u>	
Sex:			
Men (1034)	42%	42%	0
Women (1363)	32%	59%	-27
Age:			
12-13 (244)	23%	50%	-27
14-15 (283)	20%	53%	-33
16-17 (252)	18%	41%	-23
18-25 (741)	26%	47%	-21
26-34 (659)	36%	50%	-14
35-49 (457)	39%	55%	-16
50+ (548)	42%	50%	- 8
Education:			
Less than high school graduate (666)	46%	45%	1
High school graduate (836)	39%	54%	-15
At least some college (745)	25%	56%	-31
Region:			
Northeast (417)	30%	53%	-23
North Central (756)	33%	58%	-25
South (868)	50%	44%	6
West (364)	31%	47%	-16

Men divide equally between the alternatives. People with less than a high school education, and residents of the South divide roughly equally between the alternatives. In every other category of person noted above, there is marked preference for a nonlegal means of handling the marihuana situation.

4. A SUBSTANTIAL PROPORTION OF ADULTS FAVOR A LENIENT VIEW OF FIRST OFFENSE FOR POSSESSION.

When respondents are asked to stay within the framework of the legal system, and are offered a variety of choices for handling possession of marihuana:

84% favor less than incarceration for a teenage first offender (table opposite)

64% favor less than incarceration for an adult first offender

To anticipate data shown further on, a majority of the youth sample (age 12-17) reflects the views held by adults.

On the other hand, a majority of adults (and of youth) think that a jail sentence is appropriate for multiple convictions for possession.

Other data suggest that appropriateness of punishment for possession is not a completely abstract issue:

Thirty-four percent of the youth sample (Q21 Y) and 25% of the adult sample (Q25 AI) say they know someone who has been arrested on a charge of possession.

This issue is perhaps most salient to the older teens in the population (53% know someone arrested for possession) and the young adult population (48% of the 18-25 age group know someone arrested for possession).

**Adults views on appropriate penalty for possession of marihuana.
(Q24 AI)**

	<u>Defendant is teenager</u>		<u>Defendant is adult</u>	
	<u>First offense</u>	<u>Convicted before</u>	<u>First offense</u>	<u>Convicted before</u>
Base - 2405 adults				
No penalty	20%)	6%)	13%)	7%)
Fine	34 } 83	11 } 37	28 } 64	6 } 24
Probation	29)	20)	23)	11)
Jail sentence				
Up to a week	8)	20)	11)	14)
Up to a year	3 } 13	24 } 56	12 } 32	24 } 70
More than a year	2)	12)	9)	32)
No opinion	4	7	4	6

Note: All penalties except a fine would include a police record.

Example of how to read table: 20% of adults feel that there should be no penalty for a teenager at time of first conviction for possession.

The pattern of opinion among the 12-17 age group is much like the adults.

One difference between age groups is that whereas no more than 7% of the adults express no opinion on these issues, the table below shows a higher proportion of the young people who venture no opinion on these same issues.

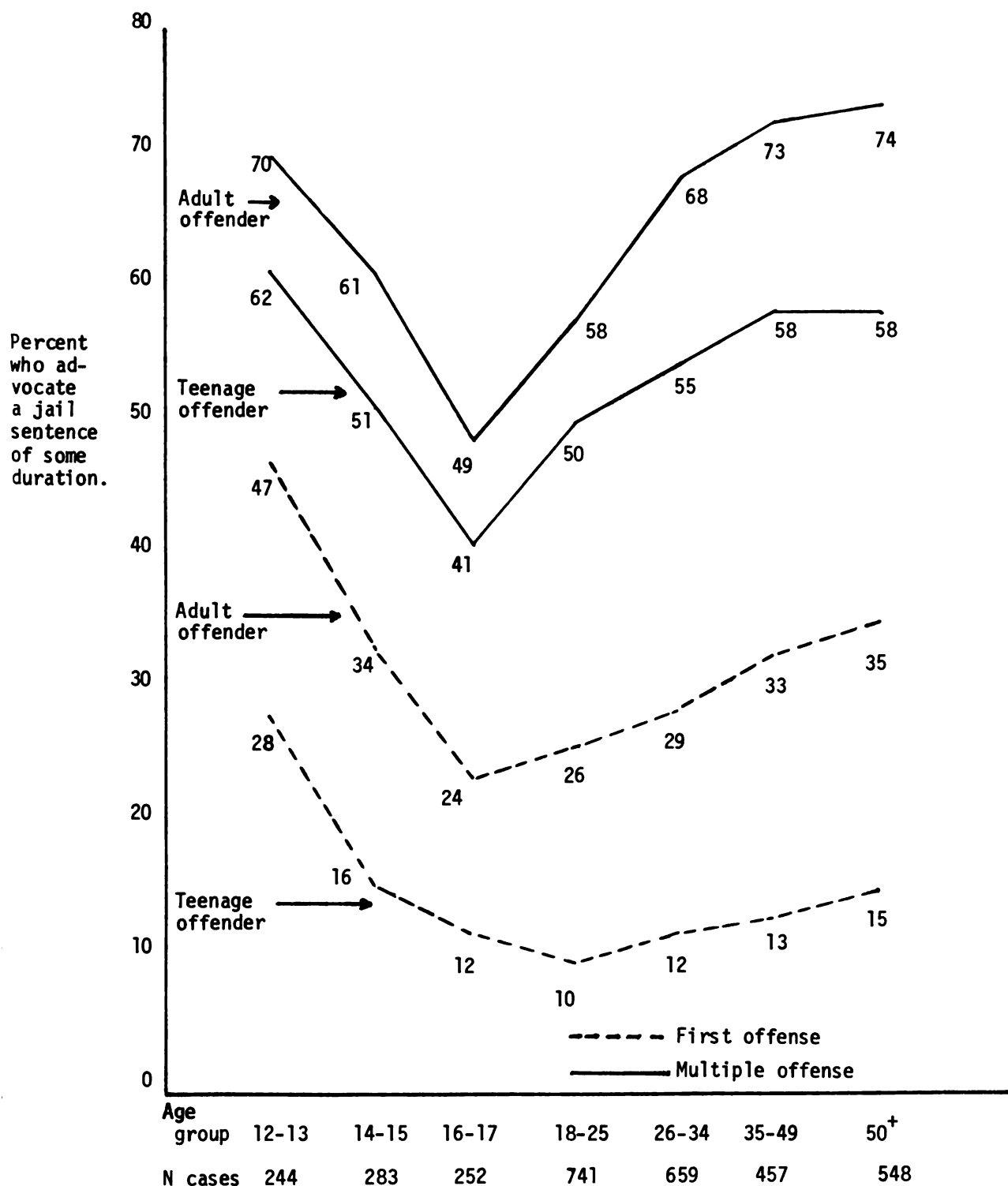
There is a core of about 6% of adults (see previous page) and 6% of the young people who do not approve of any penalty for possession, even by a multiple offender.

On the next page, there is a graphic depiction of the relationship between age and approval of some kind of jail sentence for possession. Note that the youngest age group takes a more punitive line than do their elders. Note also that attitudes towards appropriate penalties tend to become stable among adults over 25.

Youth (age 12-17) views of appropriate penalty for possession of marihuana. (Q20 Y)

	Defendant is teenager		Defendant is adult	
	First offense	Convicted before	First offense	Convicted before
Base - 781 youth				
No penalty	13%	6%	11%	7%
Fine	28 } 64	9 } 35	21 } 50	7 } 27
Probation	23 }	20 }	18 }	13 }
Jail sentence				
Up to a week	8 }	13 }	16 }	12 }
Up to a year	6 } 19	21 } 51	11 } 36	18 } 59
More than a year	5 }	17 }	9 }	29 }
No opinion	17	14	14	14

Proportions of each age group who support incarceration as appropriate penalty for possession of marihuana.



In addition to the age relationships just presented, other respondent attributes are associated with feelings about appropriateness of penalty.

First, the instances that one would expect to invoke the least punitive circumstances: a teenage first offender. The data below are for the proportions of people who believe there should be no punishment under these circumstances.

	Adults (2405)	Youth 12-17 (781)
Male	23%	15%
Female	17%	12%
Less than high school	16%	
High school graduate	16%	
At least some college	27%	
Northeast	27%	16%
North Central	17%	15%
South	15%	7%
West	26%	19%
Experience with marihuana	43%	48%
No experience	17%	8%
Freedom of expression		Data for youth
Favor less	13%	sample shown
Favor more	29%	where available.

As can be seen from the above, favorability for no punishment for first time teenagers is most marked among adults with college training, who live in the Northeast or West, and who have a permissive view towards freedom of expression in domains other than drugs.

Data for sex, region, and experience with marihuana are analogous for the adult and the youth respondents.

Something like a mirror image of the data just shown emerges from comparing population groups on circumstances which might be expected to reveal the most punitive attitudes: an adult convicted more than once for possession. The data below are for proportions of people who believe that the appropriate punishment should be more than a year in jail.

	Adults (2405)	Youth 12-17 (781)
Male	31%	32%
Female	33%	27%
Less than high school	44%	
High school graduate	34%	
At least some college	15%	
Northeast	22%	26%
North Central	31%	26%
South	45%	36%
West	24%	31%
Experience with marihuana	14%	12%
No experience	34%	33%
Freedom of expression		
Favor less	42%	
Favor more	19%	

Again, sex differences are not nearly as predictive of feelings about a jail term for an adult multiple offender as are education (college trained least favorable), region (everywhere else less favorable than the South), and personal experience with marihuana.

5. SELLING MARIHUANA IS FAR MORE OBJECTIONABLE TO MOST PEOPLE THAN IS ITS POSSESSION.

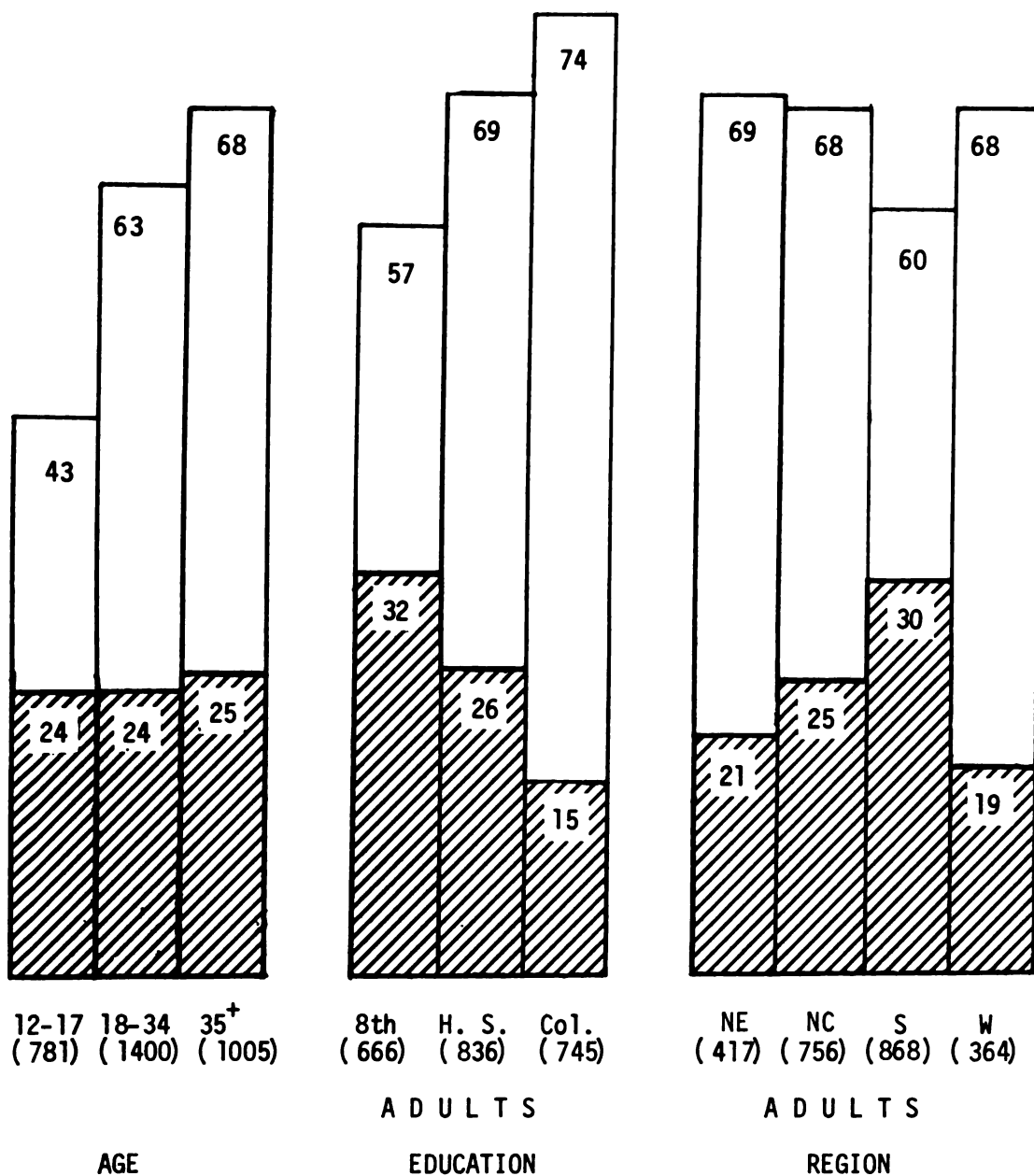
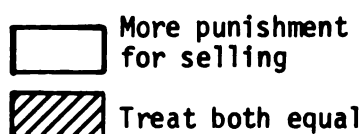
"Which should be punished more, sale or possession?"
(Q26, 27 AI; Q22 Y)

	<u>Adults</u>	<u>Youth 12-17</u>
Number of people	2405	781
Selling punished more	66%	43%
Both punished the same	25	24
Possession punished more	1	4
Punish neither	3	8
Do not punish possession	1	3
Do not punish selling	1	1
Other/no answer	3	17

As you can see above, there is a marked degree of uncertainty between the age groupings about this issue, a finding that we have pointed out before in connection with other kinds of attitudes.

Continuing with the analysis, the first set of data opposite show that differences between young and old adults is not marked. The tendency towards consensus is also apparent among educational levels beyond elementary school. And by region we see that the South is different from other regions in that people living there tend more towards equating sale and possession, whereas people in other regions see these two types of behaviors differently.

Views of population segments on punishment for sale/possession.



Legal climate and the attitudes which exist within it.

For purposes of this analysis, Commission staff assigned each state plus the District of Columbia to one of five classifications along a lenient-to-punitive dimension; a kind of legal climate scale.

Such a classification is necessarily judgmental. The major factor considered in classifying states was the penalty structure of existing legislation. Secondary factors include degree of enforcement energy, and patterns of judicial application of sanctions.

The states in each of the five classifications are listed in the Appendix to this report. For analysis purposes, we collapsed the five categories to three, which we designate here as "strict", "moderate", and "lenient".

Just to orient the reader, the proportion of people living in each of these climates is as follows:

Strict	28%
Moderate	37
Lenient	35

An examination of responses in each of the three climate categories leads to two overall conclusions:

People living in a particular kind of climate tend to have attitudes somewhat consonant with that climate: people in "strict" states are a little more resistant than others to marihuana; people in "lenient" states are a little more permissive than others.

People do not identify the legal climate that they live in in the way that Commission staff identifies it. Partly, it may be that all is relative, and, for example, tough-minded people living in a "strict" legal climate do not perceive it as particularly strict.

The next page illustrates these points.

First, two examples among many that demonstrate a relationship between legal climate and attitudes.

The notion that easing up on marihuana would give the police more time for other matters is accepted by:

42% of people in "strict" jurisdictions
59% of those in "moderate" jurisdictions
53% of those in "lenient" jurisdictions

The idea that each person should be able to decide for himself whether to use marihuana is also appealing to different degrees in the three kinds of climate:

37% in "strict" jurisdictions
49% in "moderate" jurisdictions
43% in "lenient" jurisdictions

Next, appraisal of the strictness of the laws is not related to the actual legal climate. (Q18 AI)

	<u>Legal climate</u>		
	<u>Strict</u>	<u>Moderate</u>	<u>Lenient</u>
Number of adults	575	1099	731
This state stricter than other states	14%	11%	9%
This state same as other states	29	30	28
This state not as strict as other states	20	18	17
Not sure	37	41	46

As shown above, people who live in the "strict" legal climate tend to identify their state laws as stricter than laws in other states. But also, people who live in the "strict" legal climate also tend to identify their state laws as more lenient than laws in other states.

Chapter summary

1. Nearly everyone thinks that the sale of marihuana is illegal. Almost as high a proportion believe that possession is a crime.

There is a lot less certainty about the source of legal sanction, whether there are federal laws and whether there are laws in the respondent's state.

2. Of 12 arguments for and against the wider availability of marihuana, nearly every argument is a point of view that substantial numbers of people can agree with. Aside from the possibility that each argument is individually compelling, the data suggest that there is an unsettled state of opinion in this area.

The youth sample, age 12-17, was asked to react to four of the 12 arguments administered to adults. The two arguments which a majority of youth agree with are that because of marihuana some young people are getting criminal records, and secondly, that each person should decide for himself [about using marihuana].

As between youth and adults, the younger people are less certain of their views than are adults.

3. When provided with alternative ways for society to handle the marihuana issue, a majority of adults favor a nonlegal alternative (medical approach). Sentiment of the 12-17 age group parallels that of adults, although the youth respondents exhibit less certainty about their views than older people do.
4. Staying within a legal framework, we find that majority opinion favors no jail sentence for first offenders; teenage first offenders or adult first offenders. However, incarceration is seen as appropriate for teenagers or adults who are multiple offenders.

The youngest age group (12-13) tends to take a more punitive position than older teens or adults. Least favorable to incarceration are older teens (16-17) and young adults (18-25).

5. The sale of marihuana is regarded as far more objectionable than is its possession. This feeling is especially marked among adults, but exists at all age levels.

Chapter 3

Strategies of Control

Five futures for marihuana are examined and discussed

Commercial product

Regulated product

Possession only

No change from present

More punitive than now

Adults 18 and older participated in this portion of the study. Respondents reviewed all of the futures before expressing themselves on any of them.

Future: Commercial product

The population in general strongly rejects the commercial model as a way of making marihuana available. The commercial model is turned down by all segments of the population -- including present marihuana users -- although to a different degree, and possibly for different reasons.

<u>Most receptive:</u>	<u>Ideal + good</u>	<u>Accept- able</u>	<u>Not accept- able</u>	<u>No good</u>	<u>No opin- ion</u>
Age 18-25 (741)	10%	8	27	54	1
College education (745)	5%	4	24	66	1
Live in West (364)	7%	4	16	72	1
Marihuana user (157)	27%	17	37	19	0
Race: nonwhite (304)	9%	8	13	60	10
<u>Least receptive:</u>					
Age 35-49 (457)	2%	2	12	82	2
Education: 8th grade or less (666)	4%	3	8	79	6
Live in South (868)	4%	3	10	79	4
Parents of children age 12-17 (398)	2%	2	11	84	1

Observations:

- Relatively small "no opinion" among all adults (next page) or among segments shown above.
- A majority of present marihuana users find this model unacceptable (37% plus 19% in above table). Among the 26% of users who feel that the model is ideal or good, only 8% feel it is ideal.

Discussions in the developmental group interviews for this study suggest that the commercial model is disapproved by present users for the lack of regulation (product quality) and because with branded merchandise the consumer pays for advertising. There is also the suggestion that if marihuana were to become an ordinary drug store and supermarket product, some of the satisfaction in using it would be diminished.

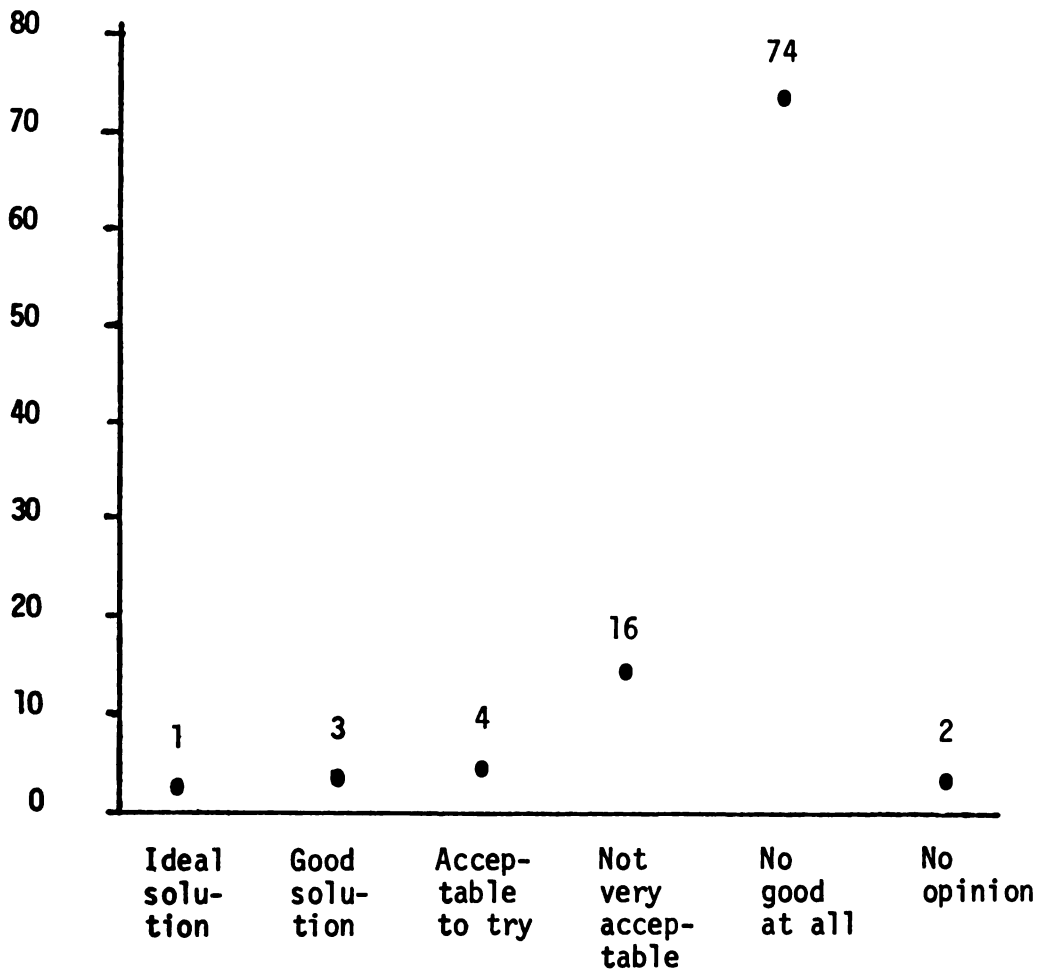
Marihuana becomes a regular commercial product

It is sold in stores and vending machines.

It comes under a variety of brand names.

There is advertising for it on TV, in newspapers and magazines.

Percent all adults



Future: Regulated product

Closest to acceptability of the three models that would permit possession is the concept of a regulated product as described on the next page.*

Notice that half of the adults reject this model out of hand (in contrast to the three-fourths who reject the commercial model). Just over a fourth of adults regard it as at least acceptable to try.

<u>Most receptive:</u>	<u>Ideal + good</u>	<u>Accept- able</u>	<u>Not accept- able</u>	<u>No good</u>	<u>No opin- ion</u>
Age 18-25 (741)	31%	22	18	28	1
College education (745)	25%	19	19	36	1
Live in West (364)	24%	15	17	43	1
Marihuana user (157)	62%	22	10	6	0
Race: nonwhite (304)	17%	21	16	38	8
<u>Least receptive:</u>					
Age 50 or older (548)	13%	7	20	57	3
Education: 8th grade or less (666)	12%	6	19	59	4
Live in South (868)	10%	8	16	61	5
Parents of children age 12-17 (398)	13%	11	18	57	1

Observation:

A majority of young adults approve of this model for marihuana (ideal + good + acceptable). The fact that 39% of this group report having had experience with marihuana is undoubtedly an influence on their attitudes.

*A reminder to the reader: All five models were reviewed by adults before questions were asked about any of them.

Marihuana becomes a closely regulated product

It is sold only in government licensed stores, like hard liquor.

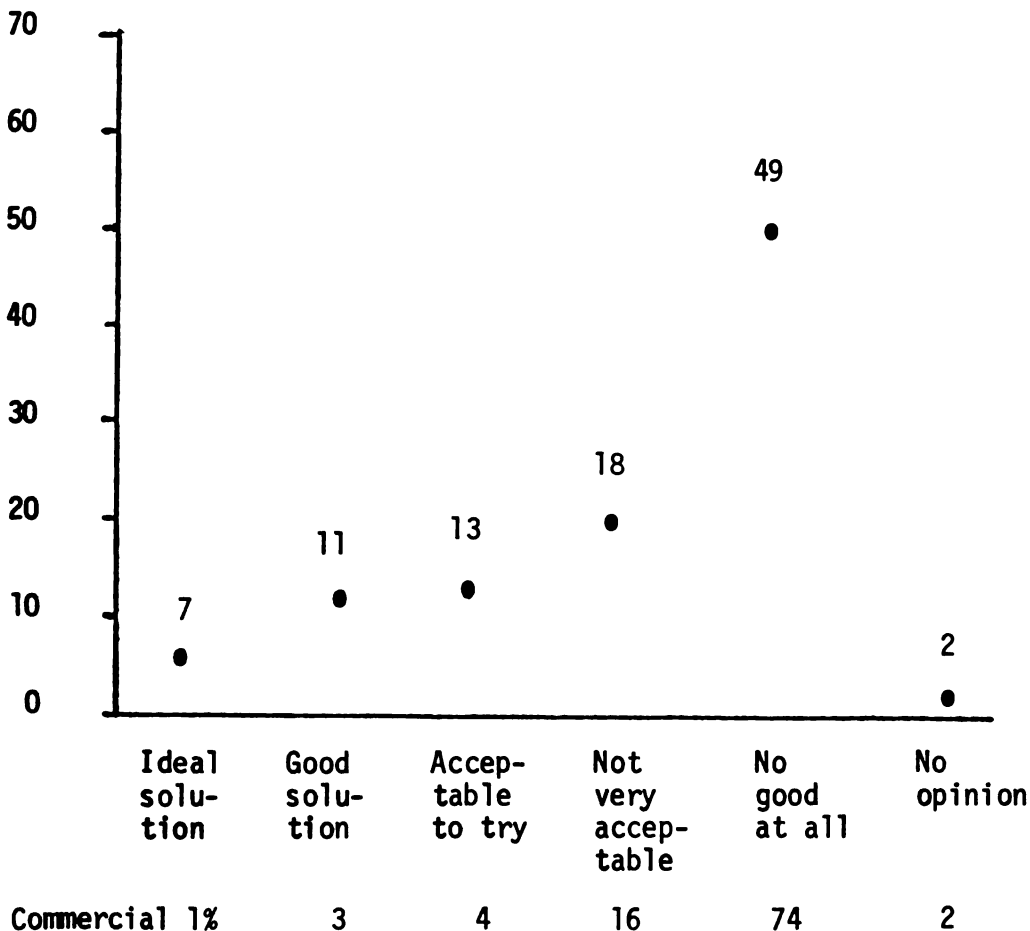
You have to be 18 or older to buy it.

No advertising is permitted. No brand names. Just called "Marihuana."

The government sets and maintains standards of quality and purity.

There would be a continuing government TV campaign and school program to teach the facts and tell you not to overdo it.

Percent all adults



Future: Possession only

About the same proportion of the public rejects this model as rejects the preceeding one, closely regulated availability. The description (next page) was reported as confusing to numerous people who could not envisage a combination of legal availability with illegal sale.

	Ideal + good + acceptable	Not acceptable + no good opinion	No opinion
Commercial	8%	90	2
Closely regulated	31%	67	2
Possession only	23%	74	3

	<u>Possession only*</u>		<u>Close regulation*</u>	
	<u>Accept</u>	<u>Not accept</u>	<u>Accept</u>	<u>Not accept</u>
<u>Most receptive:</u>				
Age 18-25 (741)	38%	61	53%	46
College education (745)	33%	66	44%	55
Live in West (364)	26%	72	39%	60
Marihuana user (157)	57%	42	84%	16
Race: nonwhite (304)	32%	57	38%	54
<u>Least receptive:</u>				
Age 50 or older (548)	17%	78	20%	77
Education: 8th grade or less (666)	17%	77	18%	78
Live in South (868)	16%	78	18%	77
Parents of children 12-17 (398)	21%	78	24%	75

Observations:

- Comparing the alternatives of possession only with close regulation, the most receptive population segments are far less approving of possession only.
- Among the least receptive population segments, there is about the same level of acceptance (roughly 20%) for either alternative. At the risk of unnecessary emphasis, it still may be worth pointing out that marihuana is indeed an issue in this country. There probably are not many criminal acts for which 20% of the lesser educated older people would approve of a radical easing up of the law.

*"Accept" is the sum of the three positive alternatives; "Not accept" is the sum of the two negative alternatives.

Having small amounts of marihuana is not prohibited, but that's all

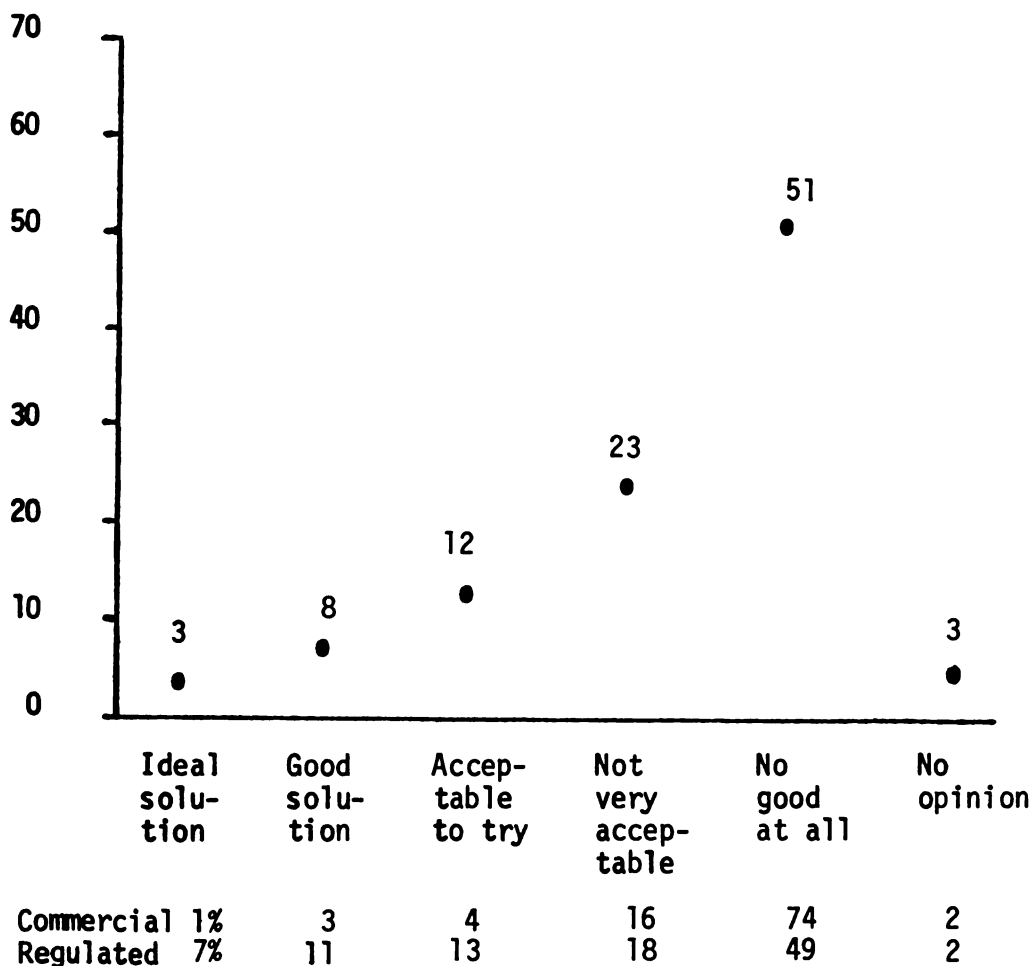
Possession for personal use is not prohibited.

You could only have as much as you could use yourself, but giving away or selling a little of it once in a while is also acceptable.

Selling it as a business is still a crime, and selling it to anyone under 18 is especially serious.

There would be a continuing government TV campaign and school program to teach the facts, and say you should not use it.

Percent all adults



Future: No change from present

About one-third of adults feel that the *status quo* is a good solution, and another sixth of the population regard the *status quo* as an ideal solution. Altogether, about six adults in ten approve to some degree of keeping present laws on possession and sale.

Most remarkable is that segments of the population who divided so sharply on each of the three alternatives that would have permitted at least possession, do not polarize much at all on keeping the present situation.

Of the various population segments examined on preceeding pages, only one, marihuana users, are substantially different from the population at large, and in the expected direction:

<u>No change from the present</u>	<u>Ideal + good</u>	<u>Accept-able</u>	<u>Not accept-able</u>	<u>No good</u>	<u>No opinion</u>
Marihuana users (157)	11%	2	31	56	0

The sentiment reflected in the display on the next page for the population as a whole roughly reflects the sentiment of each population group analyzed. This finding extends beyond demographic characteristics and includes attitudinal typologies as well. The most marked difference which we observe is between people who reflect approval of the life style of young people, and those who do not:

<u>No change from the present</u>	<u>Ideal + good</u>	<u>Accept-able</u>	<u>Not accept-able</u>	<u>No good</u>	<u>No opinion</u>
*More approval of youth (1463)	41%	7	28	23	1
Less approval of youth (942)	56%	8	13	16	7

*Index derived from responses to several questions asked before the main focus of the interview was introduced. Included were approval or disapproval of such things as rock music, taking part in demonstrations, freer sexual behavior, greater mobility (i.e., hitchhiking). The index is described in detail in the Appendix.

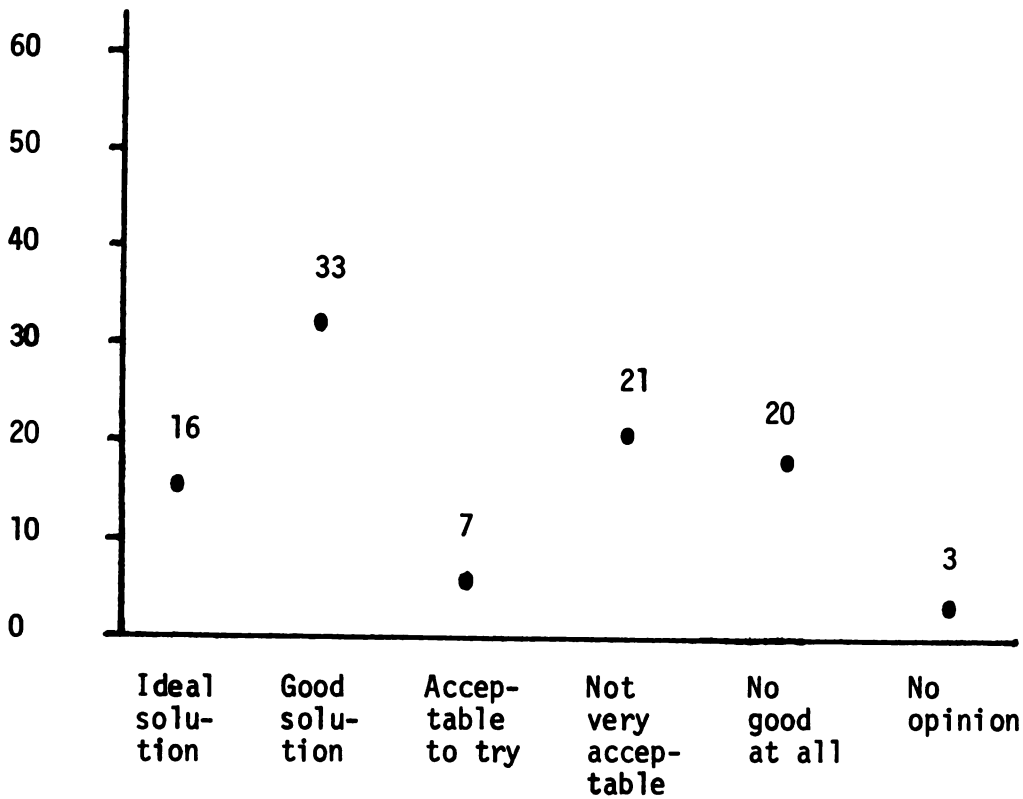
Marihuana laws just like they are now

Using or selling marihuana is illegal. It is not legally available to anyone of any age.

Police make arrests for sale or possession.

Some TV stations and some states have information programs which teach about marihuana and other drugs.

Percent all adults



Commercial 1%	3	4	16	74	2
Regulated 7%	11	13	18	49	2
Possession 3%	8	12	23	51	3

Future: More punitive climate

The presently expressed sentiment of the public is for stricter laws and law enforcement as the way to handle the marihuana issue.

As might be imagined, this alternative is a particularly divisive one, with a great deal of polarization of feeling observable among population segments. Not only does the population split according to naturalistic characteristics (i.e., demography), but also along attitudinal lines.

However, as was the case with other models discussed, differences between the sexes are less marked than differences in other domains.

	Ideal+ good	Accept- able	Not accept- able	No good	No opin- ion
<u>Most receptive:</u>					
Age 50 and older (548)	68%	13	5	9	5
Education: 8th grade or less (666)	69%	12	4	9	6
Live in South (868)	66%	11	6	11	6
Less approval of youth (942)	71%	13	5	6	5
<u>Least receptive:</u>					
Age 18-25 (741)	38%	11	12	38	1
College education (745)	45%	12	14	29	0
Live in West (364)	50%	16	10	24	0
Marihuana user (157)	1%	3	8	87	1
More approval of youth (1463)	47%	12	11	29	1

Observations:

- It is not hard to understand the overall popularity of this alternative. Strict laws and law enforcement follow a pattern of reasoning that accepts present legal concepts as essentially correct, endorses the notion that marihuana is a criminal offense, and diagnoses the problem as a lack of diligence in defining and implementing the law.
- From a look at the relationship between feelings about freedom of expression and endorsement of the more punitive model for marihuana, we may conclude that the feelings about marihuana are related to a more generalized constellation of attitudes: Nearly three-fourths (72%) of people who favor less freedom of expression are supportive of the more punitive climate for marihuana. The comparable datum for those who favor more freedom of expression is 44%.*

*Freedom of expression index constructed from combined responses to three agree-disagree items: Should people be allowed to make speeches against God; should newspapers have the right to print articles which criticize the police; should people be allowed to publish books that attach our system of government. A fuller description of this index is in the Appendix.

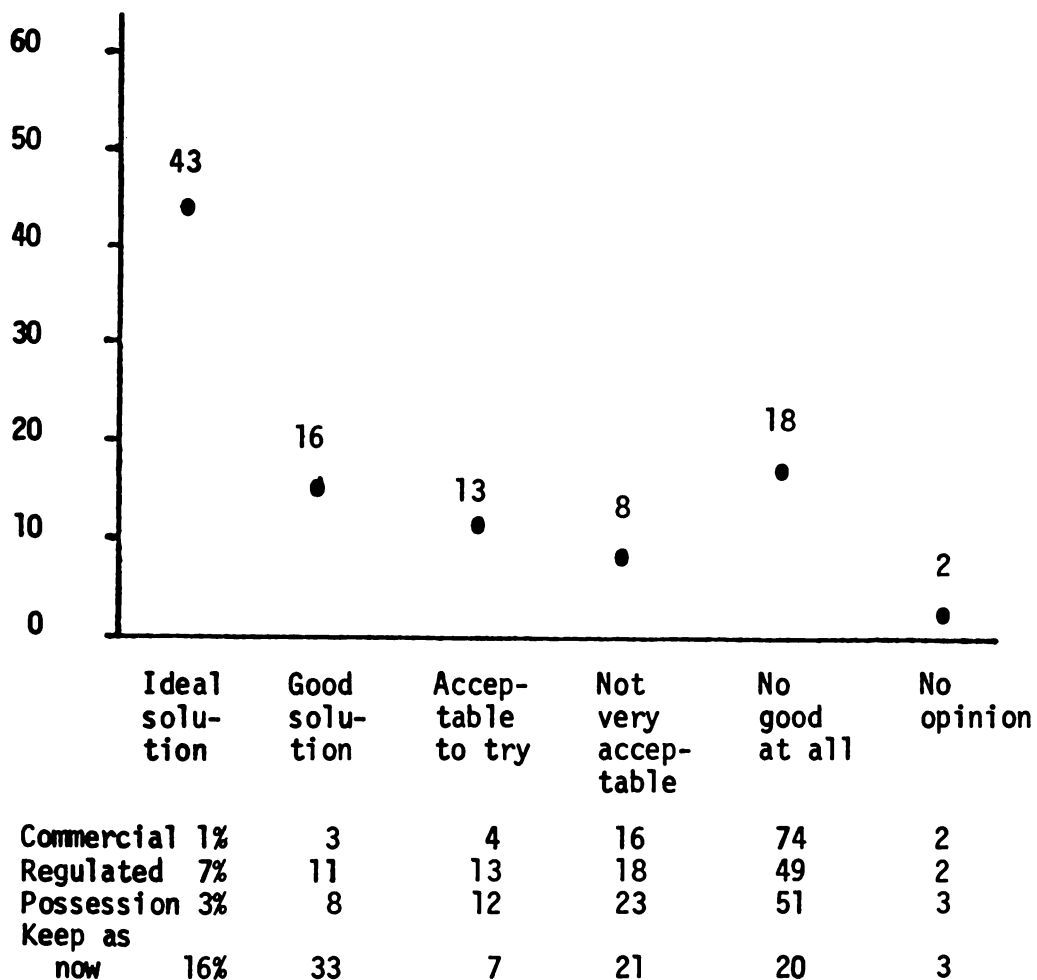
Marihuana laws are made stricter than they are now

Tougher penalties than now for using or selling it.

The full force of the law is used to find people who have it or sell it.

There would be a continuing government TV campaign and school program to teach the facts, and tell you what the penalties are for being found guilty.

Percent all adults



For each of the five futures, a discriminant analysis provided estimates of the independent contribution of several variables to the outcome.

The variables used in the analysis include age, sex, education, race, community size, region, and media usage.

Highlights:

- For one of the five futures -- keeping the laws as they are now -- none of these variables were by themselves operative more than the others in any distinct way.
- With respect to the other four futures, age is the dominant variable, and by itself accounts for more of the outcome than do any of the others. In other words, how old you are has more to do with how you react to these possibilities for marihuana than anything else about you.

Age is the only important variable in explaining how people feel about marihuana as a commercial product, and is the most important variable in explaining the outcomes to feelings about three other futures: regulated product, possession only, and stricter laws.

- Amount of formal education is next in importance to age in accounting for the outcomes of three of the futures: regulation, possession only, and stricter laws.
- Next to formal education and age, the fact of living in the South is the next most influential characteristic in explaining the outcome of feelings about two marihuana futures: regulated product and stricter laws. In other words, two adults of about the same age, and comparable amounts of schooling, are likely to feel somewhat different about the need for stricter marihuana laws if one of these adults lives in the South, and the other does not.
- Other of the variables have lesser influence. Race is of least influence among the demographic variables. In the context of the other background variables, whether a person is white or not white appears to account for very little of the outcome on any of the five futures.

These highlights give some perspective to the respondent characteristics shown on earlier pages. Interested readers will find the discriminant analysis data in Part 2, Detailed Tabulations, bound separately from this report.

Following separate consideration of each alternative, respondents were asked to make a comparative rating of the five futures (Q34 AI):

	Rating		
	Best	Second best	Worst
All adults: 2405			
Commercial	2%	3%	73%
Closely regulated	18	10	1
Possession only	5	13	3
Keep as now	9	55	2
Stricter laws	62	9	13
No opinion	4	10	8

These ratings may be regarded as considered judgments, since they not only followed a period of examination and reaction to each of the futures, but the whole discussion of the five futures came at a time in the interview when respondents had already been taken through several attitude and belief areas related to marihuana.

Assuming these are considered judgments -- and thus fairly reliable -- we think that the data support the following conclusions:*

- The adult population reflects two predispositions towards the issues involving marihuana: one group that supports the present legal structure and definition of the marihuana problem (about 70%-75% of adults are classifiable here). The other group supports a change in the relationship between the law and the marihuana user which at a minimum would include the availability of marihuana for personal use (about 20%-25% of adults are classifiable here).

*We continue to have reservations about the "possession only" option, in that its meaning was apparently less clear to respondents than the other options presented. The "possession only" option might have yielded a different outcome if respondents felt more comfortable about their understanding of it.

- The preferred options of the two segments just defined (from among the options made available to them) are:
 - A tougher, more punitive and more diligent legal code and enforcement practice (for the majority segment).
 - An application of government control to regulate the quality of marihuana and to supervise the way that it is made available to the public (for the minority segment).
- Both of these major population segments would continue to utilize governmental authority in some way.
- Relatively few adults are satisfied with the present state of affairs.
- Although the composition of each of the two segments (stricter laws vs. regulated availability) is somewhat different in terms of the characteristics of the supporters of each, each of these segments includes appreciable numbers of people of all different types.

Chapter Summary

1. The population does not accept the model of marihuana as a commercial product, widely distributed, branded merchandise, advertising in the general media.

This future for marihuana is also not acceptable to marihuana users, possibly because it invites an image of hucksterism, possibly because some of the mystique of the exotic is hard to maintain in a supermarket.

2. Most favorably regarded of all the options that would make marihuana available, is the idea of a closely regulated product, with no brand names, but with age limitations and government control of quality. This option is acceptable, good, or ideal, to about one-third of all adults, and to over half of the young adult group (18-25).
3. Possession only, the third of the futures tested, is not as well received as is the model that calls for regulation, although it is a more limited form of availability than is regulation. It is possible that regulation has some compelling attractiveness. It is also possible that the possession only option was not well comprehended.
4. Of the two futures which prohibit availability, stricter laws are more favored than is the *status quo*, keeping laws as they are now. The data suggest that favorability for stricter laws is related to more generalized attitudes which are not connected to marihuana. For example, nearly three-fourths of the people who favor less freedom of expression in our society are supportive of stricter laws for marihuana.
5. Overall, the population appears to segment into two groups; a majority group who approves of stricter marihuana laws and a minority group who favors availability within the meaning of regulation or possession only.

Chapter 4

Experience with Marihuana

Incidence and circumstances of marihuana usage provide a backdrop to understanding public attitudes, as well as being useful themselves.

Interviewing method made use of elaborate and conspicuous techniques for assuring the privacy and anonymity of respondents. These are described in Part 3 of this report, "Methods and Procedures", which is separately bound.

1. EXPERIENCE AND PRESENT USAGE.

Of all adults, 15% report direct experience with marihuana. Of all adults, 5% classify themselves as present users.

The proportion of the 12-17 year old population which has had experience with marihuana is reportedly about the same as for adults, 14%. In the 12-17 age group, 6% classify themselves as present users.

The data are more meaningful when smaller age intervals are compared with each other (bottom of next page).

Proportions of users increase during teen years. Population usage peaks during young adult years, and falls off rapidly after that point.

Other general population studies in recent years have yielded lower estimates of experience.*

Gallup	Nationwide	Adults 21 and older	1969	4% experience
Parry	Nationwide	Adults 18 and older	1970	4% experience

The differences between these estimates and those which come out of the present study are probably due to a combination of circumstances:

- A higher proportion of experience since the time of these other studies.
- A climate in which people are more willing to report their experience.
- Interviewing conditions which encourage more realistic reports and less holding back.

In connection with this last point, Manheimer reports 13% experience among San Francisco adults (1967-68 study) and 12% experience among adults in suburban California counties (1969 study). The method of eliciting information in the present study was an adaptation of procedures used by Manheimer.

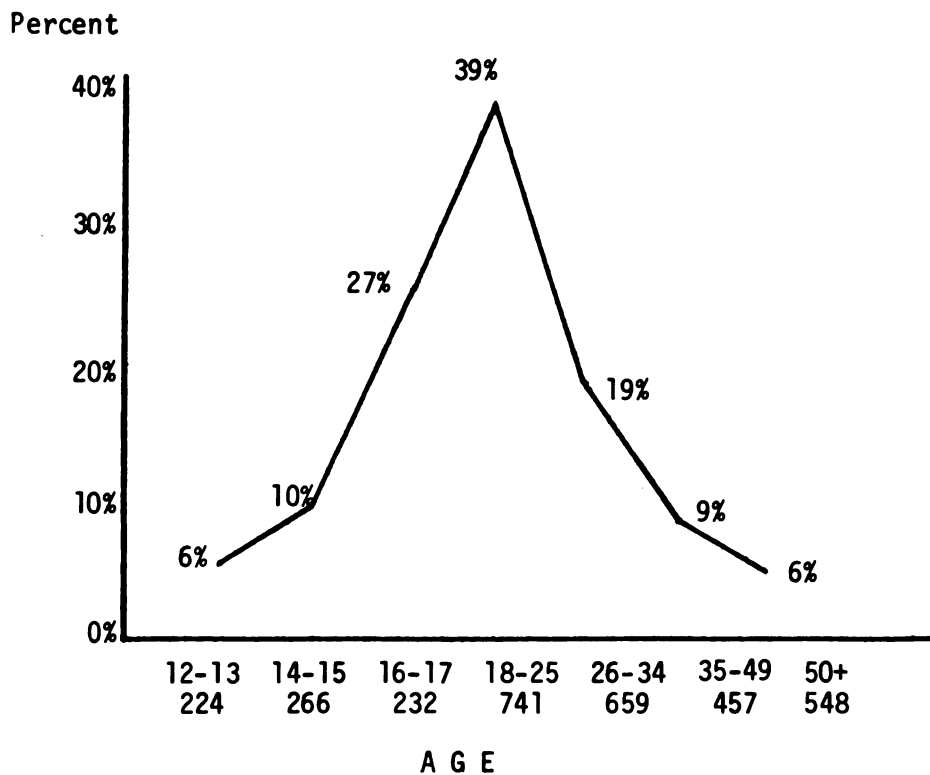
In a questionnaire completed by respondents following the personal interview in the present study, 6% of adults with marihuana experience say they have had more, and 4% of adults say they have had less marihuana experience than they reported earlier in the questionnaire. Among adults classified as nonusers, 1% say they have had more and 1% say less marihuana experience than they had already indicated.

* Data from other studies is taken from a 1971 paper prepared for the Commission by William H. McGlothlin.

Summary of experience with marihuana. (Q12,13,23 AQ; Q34,35,45 Y)

	<u>All adults</u>	<u>Youth</u>	<u>18-25</u>	<u>26 and over</u>
Number of people	2405	781	741	1664
Ever used	15%	14%	39%	9%
Use now	5%	6%	17%	1%
No longer use	6	6	15	4
No answer	4	2	7	4
Never used	71	80	54	75
No answer	14	6	7	16

Marihuana Experience by Age



Distribution of experience with marihuana among adults.

	Marihuana	
	<u>Ever used</u>	<u>Use now</u>
Adults (N=2,405)		
Sex:		
Men	21%	7%
Women	10%	3%
Age:		
18-25	39%	17%
26-34	19%	5%
35-39	13%	1%
40-49	7%	0%
50-59	6%	0%
60 or older	4%	0%
Race:		
White	15%	5%
Negro	14%	3%
Other	16%	7%
Education:		
8th grade or less	5%	0%
Some high school	11%	3%
High school graduate	14%	4%
Some college	25%	8%
College graduate or beyond	21%	6%
Now a student	44%	23%
Religion:		
Catholic	21%	7%
Protestant	12%	3%
Jew	29%	10%
Marital status:		
Never married	36%	17%
Now married	11%	2%
Divorced or separated	22%	11%
Widowed	3%	0%

Note: How to read tables. Example: 21% of the men have had experience with marihuana; 7% of men are present users.

Distribution of experience with marihuana among adults, continued.

	Marihuana	
	<u>Ever used</u>	<u>Use now</u>
Adults (N=2,405)		
Household occupation:		
Professional/technical	22%	7%
Manager/official	14%	4%
Sales	18%	5%
Clerical	21%	12%
Craftsmen/foremen	15%	4%
Operatives	15%	3%
Service workers	15%	5%
Laborers	19%	9%
Farmers	2%	1%
Income: (family)		
\$4,999 or less	12%	4%
\$5,000 - \$9,999	16%	4%
\$10,000 - \$14,999	17%	4%
\$15,000 - \$24,999	18%	5%
\$25,000 or more	15%	7%
Region:		
Northeast	20%	7%
North Central	19%	3%
South	5%	1%
West	21%	10%
Population density:		
Large metropolitan area	20%	7%
Smaller metropolitan area	18%	5%
Nonmetropolitan area	7%	1%
Type of area:		
City or town	17%	5%
Suburbs	15%	6%
Rural or other nonsuburban	7%	1%

Distribution of experience with marihuana through the youth population age 12-17.

All 12-17 year olds with marihuana experience: 109

14%	Male
14%	Female
5%	Age 12
7%	Age 13
7%	Age 14
13%	Age 15
23%	Age 16
33%	Age 17
8%	8th grade or less
17%	9th and 10th grades
30%	11th and 12th grades
13%	Living with both natural parents
20%	Some other living arrange- ment (e.g., one parent or one natural and one step parent)

Frequency of marihuana usage by people who have had experience with it.

"On the average, about how often do you use marihuana at the present time?" (Q23 AQ; Q45 Y)

	<u>Adults</u>	<u>Youth</u>
Experience with marihuana:	445	109
Present usage:		
About once a month or less	9%	15%
About two or three times a month	8	10
About once a week	4	9
A few times a week	5	4
About once a day	1	1
More than once a day	2	4
No answer *	30	12
Have used marihuana, but no longer use	41	45

* experience, but no usage information

The largest proportion of those who have tried marihuana report that they no longer use it. Modal use among adults or youth (12-17) is relatively infrequent (monthly or less often).

The reported usage above suggests a three-way segmentation of people with experience. Imperfect, but possibly helpful to consider.

Experimenters include those who have tried but no longer use. The category may include past users as well as one-time triers.

Occasional or "recreational" users include those who do not smoke marihuana every day.

Regular users includes the 3% of adults and 5% of the 12-17 group who use marihuana at least once a day. The reader should remember that these are not percents of all adults or all youth, but percents of those who report experience with marihuana. Using the total population as a base, the figures would be 1% of adults and just over 1/2% of youth.

Incidentally, one-third of adults who have had experience with marihuana (34%) report that half or more of their friends are users. Nearly two-thirds of the 12-17 year olds who have had experience with marihuana make a similar report. (Q26 AQ; Q48 Y).

2. CIRCUMSTANCES OF FIRST USE.

As documented in other studies, the marihuana milieu is a special one, with first usage nearly always in the company of others, typically in a home, and more likely to be a spontaneous than a planned activity. Although the pattern is not exactly the same for all age groups, experience of the 12-17 year olds is much like that of adults.

In the tables below, note data for adults includes a sizable proportion of people who did not respond to these items.

	Have had experience with marihuana	
	<u>Adults</u>	<u>Youth 12-17</u>
Experience with marihuana	445	109
HOW OBTAINED AT TIME OF FIRST USE (Q17 AQ; Q39 Y)		
It was given to me	62%	79%
Bought it	4	5
Got some other way	3	7
No answer	31	9
SOURCE OF FIRST USE (Q18 AQ; Q40 Y)		
Friend	51%	62%
Acquaintance	13	9
Family member	3	9
Other	5	10
No answer	28	10
SOCIAL SETTING: WHO WERE YOU WITH? (Q19 AQ; Q41 Y)		
Small group (2-5 friends)	38%	34%
With one friend	21	34
Family member	5	9
Larger group (6 or more)	5	8
By myself	3	4
Other/no answer	28	11

	Have had experience with marihuana	
	<u>Adults</u>	<u>Youth 12-17</u>
SETTING AT TIME OF FIRST USE (Q20 AQ; Q42 Y)		
Friend's home	33%	30%
Own home (parent's home)	7	7
Park or beach	6	22
School or public building	3	6
Other/no answer	51	35
SPONTANEITY (Q21 AQ; Q43 Y)		
Not planned in advance	57	66
Planned in advance	15	23
No answer	28	11
REASONS FOR FIRST TRIAL (Q22 AQ; Q44 Y)		
To satisfy my curiosity	63	55
To experience something new and exciting	26	47
To get kicks or get high	14	27
Expand my awareness and understanding	12	12
To relate better to my friends	7	14
To relieve anxiety or tension	3	12
Other people pressured me into it	6	18
To overcome boredom	4	11
(Multiple responses)		

Although curiosity is reported to be the chief motivator for initial trial, anticipation of a novel experience is also remembered as important by substantial proportions of respondents with marihuana experience. The memory of some social pressure in the situation is particularly a part of the experience of young people.

People who have had experience with marihuana, but who are not now using it, report loss of interest more than any other reason for terminating. The illegal status of marihuana is not the sole nor the most compelling explanation for adults dropping it.

Reasons for terminating usage (reported by 10% or more of either group). (Q24 AQ; Q46 Y)

	Have had experience with marihuana but no longer use it	
	<u>Adults</u>	<u>Youth 12-17</u>
Terminated	203	48*
I lost interest in it	61%	38%
It's illegal	32	31
Fear of being arrested	21	25
Fear of damage to body	18	23
Don't know about the effects	15	30
Fear of jail	16	14
Fear of damage to mind	15	21
Unavailable -- hard to get	11	5
It's morally wrong	8	19
Fear of becoming an addict	8	7
Pressure from family	7	16
I had a bad experience with marihuana	7	12
Not sure/no answer	9	13

(Multiple responses)

*Small percentage base suggests unreliability of data.

3. BEHAVIORAL CORRELATES OF MARIHUANA USAGE.

The table below shows consumption of drugs for health reasons by adults with and without experience with marihuana.

The main point of the table is that differences between these two groups of adults is not particularly remarkable.

	Experience with marihuana	
	<u>Never used</u>	<u>Have used</u>
Substances taken by adults for health reasons (Q6 AQ)	1688	445
Non-prescription pain relievers (like aspirin, Bufferin, Anacin)	93%	94%
Prescription pain killers (like codeine, morphine)	33	37
Non-prescription tension relievers or sleeping pills (like Sominex, Nytol, Compoz)	14	20
Prescription tension relievers (like Miltown, Librium, Valium)	18	22
Prescription sleeping pills or barbiturates (like nembutal, seconal, "downs")	12	15
Non-prescription pep pills (like Verve, No Doz)	5	18
Prescription stimulants (like dexadrine, benzadrine, "ups", "greenies" and diet pills)	10	14
Methamphetamines (like methedrine, "speed")	1	2
Cocaine	4	2
LSD or mescaline or peyote	1	1
Heroin ("smack", "skag")	1	0
Hashish	1	2

(Multiple responses)

Note: Data are shown only for adults. The youth sample (109 have used) is somewhat smaller than we would like for reliable data.

Marihuana usage is associated with consumption of other drugs and substances for curiosity or pleasure.

There are marked relationships between marihuana usage and consumption of two widely available substances: regular cigarettes and alcoholic beverages.

	<u>Adults-2405</u>		<u>Youth-781</u>	
	<u>Marihuana</u>		<u>Marihuana</u>	
	<u>experience</u>		<u>experience</u>	
	<u>Never</u>	<u>Have</u>	<u>Never</u>	<u>Have</u>
	<u>used</u>	<u>used</u>	<u>used</u>	<u>used</u>
PRESENT CIGARETTE CONSUMPTION				
(Q3 AQ; Q25 Y)				
Smoke cigarettes now	<u>38%</u>	<u>54%</u>	<u>9%</u>	<u>53%</u>
Less than a pack a day	13	26	7	33
One pack a day	17	19	1	16
More than one pack a day	8	10	*	2

*Less than .5%

**NUMBER OF DAYS DRANK BEER OUT OF
LAST 30 DAYS (Q5a AQ; Q27a Y)**

No days	45%	27%	67%	30%
1 - 4 days	18	26	12	43
5 - 10 days	6	17	2	9
11 days or more	9	16	1	12
No answer	22	14	18	6

**NUMBER OF DAYS DRANK WINE OUT OF
LAST 30 DAYS (Q5b AQ; Q27b Y)**

No days	50%	34%	67%	37%
1 - 4 days	11	23	9	29
5 - 10 days	3	7	1	5
11 days or more	1	7	1	7
No answer	35	29	22	22

**NUMBER OF DAYS DRANK HARD LIQUOR OUT
OF LAST 30 DAYS (Q5c AQ; Q27c Y)**

No days	45%	26%	68%	37%
1 - 4 days	19	30	6	23
5 - 10 days	6	12	1	8
11 days or more	7	8	1	5
No answer	21	24	24	27

Casual use of other drugs is shown below. The data are for adults.

"Now that you have circled the ones that you have ever taken for health reasons, please go over the list once more, and this time circle the numbers for each category that you have ever taken just out of curiosity or for pleasure." (Q7 AQ)

	Experience with marihuana		
	<u>Never used</u>	<u>Have used</u>	<u>Use Now</u>
Non-prescription pain relievers (like aspirin, Bufferin, Anacin)	1%	1%	1%
Prescription pain killers (like codeine, morphine)	1	2	5
Non-prescription tension relievers or sleeping pills (like Somnex, Nytol, Compoz)	1	2	5
Prescription tension relievers (like Miltown, Librium, Valium)	1	3	4
Prescription sleeping pills or barbiturates (like nembutal, seconal, "downs")	*	8	17
Non-prescription pep pills (like Verve, No Doz)	1	9	12
Prescription stimulants (like dexadrine, benzadrine, "ups", "greenies" and diet pills)	1	17	33
Methamphetamines (like methe- drine, "speed")	*	11	25
Cocaine	*	5	11
LSD or mescaline or peyote	*	13	31
Heroin ("smack", "skag")	*	2	4
Hashish	*	31	66

(Multiple responses)

*Less than .5%.

The belief structure which we examined in Chapter 1 shows that the public regards marihuana as a waystation to heroin. The data on this and the previous page do not substantiate this relationship. Our data indicate that consumption of alcoholic beverages and cigarettes are either waystations to or coincident with use of marihuana, and that of the other exotic drugs, "speed", LSD, hashish, are more likely than heroin to be used by marihuana users.

4. PEOPLE WITHOUT MARIHUANA EXPERIENCE

This is the 71% of adults and 80% of the 12-17 year age group who report no trial of marihuana.*

At least a high enough proportion of nontriers feel that they could find marihuana if they wanted to, to rule out availability alone as a reason for nontrial:

16% of adults and 31% of the 12-17 age group

In fact, both groups of nontriers (the young and the older) are adamant about not using it.

"Under what circumstances would you try marihuana?"
(Q16 AQ; Q38 Y)

	<u>No experience with marihuana</u>	
	<u>Adults</u>	<u>Youth 12-17</u>
	1688	627
Not try under any circumstances	81%	73%
If it were legal	4	13
At a close gathering of friends if others were smoking it	3	6
If I knew where to get some	1	*
If I were outside the United States	*	*
No answer	12	25

(Multiple responses)

*Less than .5%.

Findings already discussed indicate that trying marihuana is not an isolated activity. People who try marihuana are also likely to be triers of other drugs, common and exotic, just for pleasure. Thus we suggest that although the proportions who feel they would not try it under any circumstances would be reduced somewhat if marihuana were legally available, there would still be large proportions of adults and young people who were simply not in the market for it.

*The percent of no trial plus the percent who have tried do not add to 100% because of some people who did not answer the relevant questions.

The concerns about marihuana extend beyond its being illegal.

Majorities of young people (the nonexperienced) are concerned about personal harm as well as about legal consequences.

Notice the proportion of the youth sample of nontriers who feel they are in part responding to parental or peer group pressure to stay away from marihuana.

"What are the main reasons you have never tried marihuana?"
(Q14 AQ; Q36 Y)

	Have not had experience with marihuana	
	<u>Adults</u>	<u>Youth 12-17</u>
Number of people	1688	627
It's morally wrong	47%	48%
Fear of damage to body	39	58
Fear of damage to mind	37	55
Fear of becoming an addict	24	36
Don't know about effects	21	23
It's illegal	36	53
Fear of being arrested	9	21
Fear of jail	7	18
Pressure from family	4	21
Pressure from friends	2	10
Unavailable/hard to get	5	6
Costs too much money	4	8
Not sure/no answer	20	15

(Multiple responses)

5. SPECULATION ABOUT USAGE IF MARIHUANA WERE LEGAL.

Continuing the speculation about how marihuana might be received under other circumstances, the table below indicates that some proportion of these with marihuana experience think they would increase their usage, and a relatively small proportion of adults with no marihuana experience think they would try it. Rehearsal of trial or increased usage is somewhat higher among the youth sample than among adults.

The dominant majority of both groups believe they would not use marihuana.

"If marihuana were legal, and available, would you probably:" (Q25 AQ; Q47Y)

	<u>Marihuana</u>			<u>Marihuana</u>		
	<u>All</u>	<u>Exper-</u>	<u>No exper-</u>	<u>All</u>	<u>Exper-</u>	<u>No exper-</u>
	<u>adults</u>	<u>ience</u>	<u>ience</u>	<u>youth</u>	<u>ience</u>	<u>ience</u>
	2405	445	1688	781	109	627
Try it	4%	4%	4%	12%	16%	12%
Use it more	2	10	0	4	30	0
Use it less	0	0	0			
Use as often	4	21	0	3	22	0
Not use	72	43	82	59	14	67
Don't know/no answer	18	22	14	22	18	21

Chapter Summary

1. Experience with marihuana: 15% of adults, 14% of the 12-17 age group. Use marihuana now: 5% of adults; 6% of youth, 12-17.
2. Largest proportions of marihuana experience are among adults age 18-25 (39% triers, former users, or current users). College students are another relatively high experience group (44%).
3. The largest category of people with marihuana experience are people who are no longer users (41% of adults; 45% of youth).

Next in size are those people who are relatively infrequent users.

Regular users (at least once a day) are a very small part of the population. About 1% of all adults, and just over 1/2% of all youth fit into this category.

4. In describing the circumstances of first use of marihuana, the data suggest the casual social nature of trial. Most people were given marihuana the first time. They did not buy it. A friend was the source. The activity took place with one or more other people. Typically first use was in a friend's home. And the majority indicate that they had not planned this activity. It was spontaneous.

For most people, satisfying their curiosity was a prime motivator for trial. The remembrance of some social pressure is apparent in the reports of a substantial minority of young people (about 18%).

5. There is a marked relationship between use of marihuana and the use of cigarettes and alcoholic beverages. Marihuana users also report some experience with other substances, such as hashish, methamphetamines, and LSD. There are relatively few reports of marihuana users also having experience with heroin.
6. A majority of all adults and all youth believe that if marihuana were made legal, they would not use it.

Chapter 5

Information and Communication

Preferred sources for learning about marihuana.

Awareness of marihuana over time.

Relationship of media usage to beliefs about marihuana.

1. ADULTS INVOKE THE TRADITIONAL INSTITUTIONS AS PROPER SOURCES FOR EDUCATION AND BELIEFS ABOUT MARIHUANA.

School, doctor, family, and church are most frequently identified by adults as appropriate sources of information and beliefs about marihuana (table next page).

For adults, and even for young people, the educational system is most often regarded as the proper place to get such education.

A somewhat larger proportion of young people than adults see the mass media as appropriate to learning about marihuana. About one-third of the youth respondents regard either television or the print media as information sources.

A major source of difference between the two broad age groups is in the role of personal experience as a teacher: 20% of youth and 9% of adults think that personal experience is a good way to learn.

Adults who themselves have tried marihuana are also inclined to think that personal experience is a good source of education in this sphere.

Thirty-two percent of adults with experience with marihuana, compared with 5% of adults without such experience, think that trying marihuana is a good way to learn about it.

Preferred sources of information, which we have just been discussing, are different from actual sources of information, where young people now get their ideas about marihuana. Adults who were asked to speculate about actual sources of information suggest these three as the most likely places where young people are getting marihuana information: people outside the family (38%), newspaper and magazine stories (32%), and television news or stories (32%).

"From which of these sources do you think the average young person should get most of his knowledge and opinions about marihuana?"
(Q28 AQ; Q49 Y)

	<u>Preferred sources in the opinion of:</u>	
	<u>Adults</u>	<u>Youth 12-17</u>
Number of people	2405	781
Information programs or booklets at school	50%	54%
Family doctor	38	34
Family members	31	21
Religious leaders at church	26	12
Television news or stories	26	31
Newspaper and magazine stories	24	32
Personal experience with it	9	20
People outside the family	8	21
Movies	6	11
No opinion/no answer	23	15

(Multiple responses)

2. YOUNG PEOPLE REPORT AN EARLY AWARENESS OF THE EXISTENCE OF MARIHUANA; BUT SUBSTANTIAL PROPORTIONS OF YOUNG PEOPLE HAVE HAD NO CLOSER CONNECTION THAN AWARENESS ALONE.

The first table on the next page indicates that about half of the youth age 12-17 had heard about marihuana when they were 11 years old or younger. And by age 14 or 15, nearly everyone had heard of it.

Going beyond awareness alone, the young people age 12-17 segment into two groups: those for whom marihuana became more salient, and those for whom marihuana did not become more salient.

Marihuana more salient:

About 62% who have known someone who had tried marihuana

About 31% who have felt curious about trying marihuana themselves

Marihuana less salient:

34% who have never known anyone who has tried marihuana

64% who have never felt curious about trying it themselves

With respect to knowing a user, and curiosity about trying marihuana, there are notable differences between young people who themselves have had experience with marihuana and those who have not had such experience.

"About how old were you when you first heard or read about marihuana?" (Q30 Y)

	<u>Youth</u>	<u>Have used marihuana</u>	<u>Have not used marihuana</u>
Number of people	781	109	627
11 or younger	49%	35%	53%
12	21	24	22
13	12	18	12
14	10	16	9
15	2	4	2
16	1	1	1
17	*	2	0
Never	*	0	*
No answer	5	0	1

*Less than .5%

"About how old were you when you first knew someone who had tried marihuana?" (Q31 Y)

	<u>Youth</u>	<u>Have used marihuana</u>	<u>Have not used marihuana</u>
11 or younger	9%	20%	7%
12	9	10	9
13	17	32	15
14	11	14	11
15	11	15	11
16	4	6	4
17	1	2	1
Never	34	1	42
No answer	4	0	0

"About how old were you when you first felt a bit curious about marihuana and thought that you might try it sometime?" (Q32 Y)

	<u>Youth</u>	<u>Have used marihuana</u>	<u>Have not used marihuana</u>
11 or younger	2%	10%	1%
12	5	15	3
13	6	13	4
14	7	20	5
15	7	19	5
16	3	15	2
17	1	3	1
Never	64	4	78
No answer	5	1	1

Adults who have used marihuana report an earlier awareness and curiosity than do adults with no direct experience with it. (Tables next page.)

Notice opposite that a larger proportion of adults with marihuana experience than those without it were aware of marihuana at a younger age, knew someone who had used it at a younger age; and were themselves curious about it at a younger age.

Two observations suggest themselves. One is that marihuana is part of a social scene far more than being a drug for loners. Young people whose friendship circle is receptive to marihuana probably talk about it, know who smokes it, and are curious to try it themselves more than are young people whose friends exclude marihuana from their world.

A second observation is related to the first. When adults report on events which may have taken place years ago, there may be a tendency to distort time, so that people with marihuana experience may remember awareness and curiosity about marihuana going back even further in time than was actually the case.

"About how old were you when you first heard or read about marihuana?" (Q8 AQ)

	<u>All adults</u>	<u>Have used marihuana</u>	<u>Have not used marihuana</u>
Number of people	2405	445	1688
14 or younger	12%	25%	12%
15 - 19	24	34	26
20 - 24	10	5	13
25 and older	32	3	42
Never	*	0	*
No answer	23	33	7

*Less than .5%

"About how old were you when you first knew someone who had tried marihuana?" (Q9 AQ)

	<u>All adults</u>	<u>Have used marihuana</u>	<u>Have not used marihuana</u>
14 or younger	3%	12%	2%
15 - 19	16	49	12
20 - 24	8	11	8
25 and older	17	7	22
Never	38	1	52
No answer	18	20	4

"About how old were you when you first felt a bit curious about marihuana and thought that you might try it sometime?" (Q10 AQ)

	<u>All adults</u>	<u>Have used marihuana</u>	<u>Have not used marihuana</u>
14 or younger	1%	6%	*%
15 - 19	10	50	3
20 - 24	4	18	2
25 and older	4	7	4
Never	64	6	88
No answer	17	13	3

*Less than .5%

Exposure to mass media and beliefs about marihuana.

Curiosity about the effect that the media are having on beliefs about marihuana will not be satisfied here. The nature of the study design does not permit conclusions about what the media are doing to people's attitudes.

Rather, the purpose of this analysis is largely to provide a crude idea of what kinds of attitudes the media have available to them to work with. That is, heavy media consumers are more likely to be reachable as readers and viewers than are people who attend less to newspapers, magazines, and television news.

A secondary purpose is to determine if in fact there is a unique pattern of beliefs about marihuana associated with heavy media consumers, as compared with others. Such a unique pattern of beliefs might then lead to speculation about the kinds of people who are disproportionately exposed to the media.

A dichotomy of adults by media consumption is based on an index derived from responses to three questions:

- a. Readership of a daily and Sunday newspaper.
(Q35 AI)

Five, six, or seven days a week: 72% of adults

- b. Number of different magazines read or looked into during past seven days. (Q36 AI)

Three or more magazines a week: 47% of adults

- c. Number of days out of the past seven watched a regularly scheduled news program on television.
(Q37 AI)

Four or more days a week: 65% of adults

A heavy media consumer was defined as someone who is in all three of the consumption categories shown above. These heavy consumers account for 27% of adults.

Characteristics of heavy media consumers as defined by the index:

- About the same proportion of each sex (26% men; 29% women)
- Older adults rather than younger (18% of age 18-25; 28% of age 26-34; 32% of age 35-49; 29% of age 50 and older)
- People with more rather than less formal education (14% of those who have not graduated high school; 31% of high school graduates; 43% of adults with some college)
- People who live anywhere but in the South (34% Northeast; 29% North Central; 18% South; 30% West)
- Whites more than nonwhites (29% white; 16% nonwhite)

Findings:

Every attitude, knowledge, and belief question was examined for differences between the heavy media consumers and others. There were very few differences observed between heavy media consumers and others -- so few differences that the number of items with a statistically meaningful difference in response between the two groups are just a few more than the number of items that would be expected to show up as different on the basis of chance alone.

In one area, attitudes related to legal aspects of marihuana, there were more such differences than elsewhere in the study. Heavy media consumers were a little less likely than others to believe that stiffer penalties would discourage use (51% to 63% for others), that legal marihuana would make drug addicts out of ordinary people (39% to 49% for others), and that legal marihuana would lead to teenagers becoming irresponsible and wild (49% to 61%).

A regression analysis of sex, age, education, region of country, and media usage on selected attitudes suggests that the differences on these items of heavy vs. other media consumers are explained largely by differences in education and age of the two media consumption groups, rather than by the greater or lesser exposure to newspapers, magazines, or television.*

Two possible conclusions: the index of media exposure was inappropriately constructed as a definition of media usage, or, media consumption is simply not related to beliefs about marihuana.

*The separately bound Part 2, Detailed Tabulations, includes the regression data.

Chapter Summary

1. Adults and youth age 12-17 regard school as the one most preferred source of information about marihuana for young people.

One-third or more of adults also show preference for the family doctor and family members as desirable places for young people to get information.

One-third or more of the young people include the mass media: television, newspapers and magazines as other good places to get marihuana information, and also think of the family doctor as a good source of information.

2. Young people are aware of the existence of marihuana at an early age. About 62% have known someone who had tried marihuana, and about 31% identify a time when they themselves felt curious about trying it.
3. Adults who have used marihuana report an earlier awareness of it and curiosity about it than adults without any marihuana experience.
4. An analysis of two groups of adults -- those who are heavy users of the mass media and those who are not -- reveals little in the way of attitudinal differences regarding marihuana between these two groups.

APPENDIX

Sample characteristics compared with
census estimates.

Notes on Part 2, Detailed Tabulations

Explanation of analysis variables

Copies of questionnaires

Sample characteristics compared with census estimates (adult sample)

	<u>Sample</u>	<u>Census*</u>
SEX		
Men	49%	48%
Women	51	52
AGE		
18-25	21%	21%
26-34	17	17
35-39	8	8
40-49	17	18
50-59	15	15
60 or older	22	21
EDUCATION		
8th grade or less	20%	24%
Some high school	15	17
High school graduate	34	36
Some college	12	13
College graduate	13	10
Other	6	
RACE		
White	87%	87%
Other	11	13
Unclassifiable	2	
MARITAL STATUS		
Married	69%	69%
Single	18	17
Widowed	9	9
Divorced/separated	4	6
REGION		
Northeast	25%	24%
North Central	28	28
South	30	31
West	17	17

*Source: Population Characteristics: current population reports.
U. S. Bureau of the Census, 1971.

Notes on Part 2, Detailed Tabulations

Included in the Detailed Tabulations, a separately bound volume:

1. Basic data for adults

- a. Percentaged data for each question for all adults, and for these subgroups:

Sex

Age

18-25

26-34

35-49

50 and older

Education

Less than high school graduate

High school graduate

At least some college

Region of the country

Northeast

North Central

South

West

Race

White

Other

*Experience with marihuana

Yes

No

*Marihuana users

*Community type

Large metro area

Other metro area

Nonmetro area

*Children at home

Age 12-17

Under 12

None under 18

*Approval of youth

Less

More

*Freedom of expression

Less

More

*Media usage

Heavy

Other

*These items are explained in more detail starting on page A-6 of this Appendix.

- b. Unweighted frequencies (i.e., actual numbers of people) for each set of subgroup tables.
 - c. Weighted frequencies for each cell to permit re-percentaging of data in combinations of subgroups or item alternatives other than those provided.
- 2. Other crosstabulation data for adults, including selected items repercentaged by smaller age intervals (18-21, 22-25, 26-29) than those in the basic tables.
- 3. Summary tables for regression analyses.
- 4. Basic data for youth sample, age 12-17.
 - a. Percentaged data for each question for all youth age 12-17, and for these subgroups:

Sex

Age

12-13

14-15

16-17

Education

8th grade or less

9th through 12th grades

*Experience with marihuana

Yes

No

*Region of the country

Northeast

North Central

South

West

*Community type

Large metro area

Other metro area

Nonmetro area

- b. Unweighted and weighted frequencies comparable to those for adult sample.

*These items are explained in more detail starting on page A-6 of this Appendix.

Explanation of analysis variables

These are variables which are not self-explanatory. They are the sources of some of the data in the main text, and in the Detailed Tabulations, the separately bound Part 2 of this report.

1. Region of the country (adult sample and youth sample)

States grouped as Northeast (census classifications of New England and Middle Atlantic)

Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania

States grouped as North Central (census classifications of East North Central and West North Central)

Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas

States grouped as South (census classifications of South Atlantic, East South Central, and West South Central)

Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, Texas

States grouped as West (census classifications of Mountain and Pacific)

Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, California

2. Community type (adult sample and youth sample)

Large metro area includes the top 25 Standard Metropolitan Statistical Areas (SMSA):

New York	Newark
Los Angeles	Minneapolis-St. Paul
Chicago	Dallas
Philadelphia	Anaheim-Garden Grove-
Detroit	Santa Ana
San Francisco	Seattle
Washington	Milwaukee
Boston	Cincinnati
Pittsburgh	Atlanta
St. Louis	Paterson-Clifton-
Baltimore	Passaic
Cleveland	Buffalo
Houston	San Diego
	Miami

3. Children at home (adult sample)

12-17 category. One or more children living at home in this age group. Household may also include younger children.

Under 12 category. One or more children in this age group at home. Household may also include children 12-17.

None under 18. Self-explanatory.

4. Experience with marihuana (adult sample and youth sample)

"Yes" group includes persons who report having tried marihuana or who use marihuana on a regular basis.

Source for adults:

Q. 12 self-administered: "If you did have the chance to try marihuana at that time, did you try it?"

Plus

Q. 13 self-administered: "If you did not try marihuana at that time, when was the first time that you tried marihuana?"

Q. 23 self-administered: "On the average, about how often do you use marihuana at the present time?"

Source for youth sample. Same question text as above, but question numbers are 34, 35, and 45 in youth questionnaire.

5. Marihuana users (adult sample only; youth sample too small for reliable data)

Q. 23 self-administered: "On the average, about how often do you use marihuana at the present time?"

About once a month or less
About two or three times a month
About once a week
A few times a week
About once a day
More than once a day
I have used marihuana but I don't use it now

6. Index: Approval of youth (adult sample)

Based on Q. 5, adult interview: "Do you generally approve or generally disapprove of young people doing or liking these things?"*

	<u>Ap- prove</u>	<u>Disap- prove</u>
Rock music	64%	28%
The way young people dress, such as long hair, blue jeans, etc.	47	46
Taking part in protests and demonstra- tions	28	64
Traveling and hitchhiking around this country and other countries	25	70
Freer sexual behavior	16	76
Use of marihuana	8	89
Use of other drugs	1	97

* Data shown for these items because not reported elsewhere in the main report.

Index construction:

Approval of none or one of the seven items - "less" approval

Approval of more than one of the seven items - "more" approval

7. Index: Freedom of expression (adult sample Q8d,e,f, AI)

Same questions asked of youth sample (Q11d,e,f, Y) but not combined into an index.

	Adults			Youth		
	Yes	No	Other/no opinion	Yes	No	Other/no opinion
Should newspapers have the right to print articles which criticize the police	54%	31	15	41%	29	30
Should people be allowed to publish books that attack our system of government	43%	44	13	37%	30	33
Should people be allowed to make speeches against God	38%	56	6	33%	42	25

Index construction:

0 or 1 yes: favor less freedom of expression

2 or 3 yesses: favor more freedom of expression

8. Media exposure (adult sample)

Based on three questions:

"In the average week, about how many days do you read a daily paper?" (Q35 AI)

	<u>Total adults</u>
One	6%
Two	4
Three	5
Four	4
Five	5
Six	6
Seven	61

"About how many different magazines did you read or look into for five minutes or more during the past seven days?" (Q36 AI)

	<u>Total adults</u>
None	25%
One or two	26
Three to five	33
Six to eight	8
Nine or more	6
Not sure/no answer	2

"On how many of the past seven days did you watch a regularly scheduled news program on television?" (Q37 AI)

	<u>Total adults</u>
One	5%
Two	7
Three	8
Four	6
Five	8
Six	5
Seven	46

Index construction:

Heavy media user: Newspapers 5 or more times a week, plus 3 or more magazines a week, plus television news 4 or more times a week.

Other: everyone else.

9. Commission classification of states.

Chapter 2 includes data for selected questions analyzed according to the "legal climate" of the respondents' states.

The basis for classifying states in this way is described in a letter from the Commission. The appropriate excerpt:

" . . . we have attempted to align the jurisdictions on a 'legal climate' scale. In assigning the various jurisdictions places on this five-classification scale, we have taken into consideration a number of factors. The major factor was the penalty structure of existing legislation regarding possession of marihuana. Secondary factors were the degree of enforcement energies devoted to enforcement of possession prohibitions, the patterns of judicial application of the sanctions and our perceptions of the general direction of public emphasis on the criminal model of marihuana control. Also important in this regard was the timing of any reduction in penalties for possession and the extent to which such legislative action was achieved separately from a general revision of the narcotics laws."

Here are the five groups of states, in order from most strict to least strict. For our purposes we combined categories I and II, and categories IV and V.

- I. Alabama, Texas
- II. Arizona, Arkansas, Florida, Indiana, Louisiana, Kansas, Michigan, Mississippi, Montana, Nevada, Pennsylvania, Rhode Island
- III. Alaska, California, Colorado, Georgia, Illinois, Kentucky, Maryland, Massachusetts, Minnesota, New Mexico, North Carolina, North Dakota, Oregon, South Carolina, South Dakota, Tennessee, Utah, Virginia, Wisconsin
- IV. Connecticut, Delaware, Idaho, Iowa, Maine, Missouri, New Hampshire, New York, Ohio, Oklahoma, Vermont, Washington, West Virginia, Wyoming
- V. District of Columbia, Hawaii, Nebraska, New Jersey

Copies of Questionnaires

Adult interview (white)*

Adult self-administered questionnaire
(orange cover)

Youth self-administered questionnaire
(green)

* A copy of Card D, used with the adult interview, may be found right after the adult interview form. The content of this card is not apparent from the questionnaire itself.

SOCIAL ISSUES

hello, I'm _____ and I'm working on a study for Response Analysis Corporation of Princeton, New Jersey. We are asking people for their opinions on a number of issues which are being talked about in the country these days. For example:

1. Thinking for a moment of the problems that face this country today, which two or three problems do you think are most serious and need attention?

1 _____	121-
2 _____	122
3 _____	<input type="checkbox"/>
	<input type="checkbox"/>

2. Of the problems which you just mentioned, which one of them do you think is the most serious problem that the country has to face?

1 NO ANSWER	2 (WRITE IN) _____	123
-------------	--------------------	-----

3. How about the problems that need the most attention here, in and around the community where you live? What are two or three problems around here that need the most attention?

1 _____	124-
2 _____	125
3 _____	<input type="checkbox"/>
	<input type="checkbox"/>

4. Some of the values and attitudes of teenagers and young people today are quite different from those of past generations, as expressed in their clothing styles, hair length, preferences for rock music and other behavior. How do you feel about these young people and the way they live: are you mostly favorable, mostly unfavorable or somewhere in between?

	1 MOSTLY FAVORABLE
126	2 MOSTLY UNFAVORABLE
	3 SOMEWHERE IN BETWEEN
	4 NO OPINION

5. Here are things that some young people do or like these days. For each one please tell me whether you generally approve or generally disapprove of young people doing or liking these things. (READ EACH ONE AND RECORD ANSWER.)

	APPROVE	DISAPPROVE	NO OPINION	
a. The way young people dress, such as long hair, blue jeans, etc.	1	2	3	127
b. Rock music	1	2	3	128
c. Taking part in protests and demonstrations	1	2	3	129
d. Freer sexual behavior	1	2	3	130
e. Traveling and hitchhiking around this country and other countries	1	2	3	131
f. Use of marihuana	1	2	3	132
g. Use of other drugs	1	2	3	133

6. Do you think that as young people become older, their tastes and styles and activities will probably change, or do you think that these young people will continue to look and act in these new ways?

134 1 PROBABLY CHANGE
 2 PROBABLY CONTINUE TO BEHAVE THIS WAY
 3 PROBABLY CHANGE IN SOME WAYS, NOT IN OTHERS
 4 NO OPINION

7. Do you think that in future years the kinds of young people we have been talking about will be responsible citizens, or not?

135 1 YES
 2 NO
 3 SOME WILL, SOME WON'T
 4 NO OPINION


8. The next few questions are about other issues that are in the news. For example,

	<u>YES</u>	<u>NO</u>	<u>DEPENDS</u>	<u>NOT SURE, NO OPINION</u>	
a. Should a policeman be able to go into a house to look for evidence, without having to get a search warrant?	1	2	3	4	136
b. Should any adult who wants to, have the right to own a pistol?	1	2	3	4	137
c. Should a policeman be able to stop and search a person on the street if he thinks that person looks suspicious?	1	2	3	4	138
d. Should people be allowed to make speeches against God?	1	2	3	4	139
e. Should newspapers have the right to print articles which criticize the police?	1	2	3	4	140
f. Should people be allowed to publish books that attack our system of government?	1	2	3	4	141

HAND CARD A

9. Here is a list of various drugs, medicines and other substances. Please read through the list and tell me the number alongside each one that you have heard of. A category counts if you have heard of one or more things in it.

	142-143	144-145
	<u>Q. 9</u>	<u>Q. 10</u>
	<u>HAVE</u>	<u>CAN BE</u>
	<u>HEARD OF</u>	<u>HARMFUL</u>
1 Amphetamines (such as dexadrine, "pep pills," benzadrine, "ups," "greenies")	1	1
2 Methamphetamines (such as methedrine, "speed")	2	2
3 Pain relievers (such as aspirin, Bufferin, Excedrin, Anacin, Alka-Seltzer)	3	3
4 Pain killers (such as codeine, morphine)	4	4
5 Tension relievers or tranquilizers (such as Miltown, Librium, Valium)	5	5
6 Barbiturates (such as nembutal, seconal, "downs")	6	6
7 Cocaine	7	7
8 LSD or mescaline or peyote	8	8
9 Heroin	9	9
10 Alcohol (such as liquor, wine, beer)	10	10
11 Marihuana ("pot," "grass," "reefers")	11	11
12 Tobacco (such as cigarettes, cigars)	12	12
No answer	R	R

10. Now please read through the list again and tell me the number of each item that you think can be harmful to people who use them, even in small amounts. 

11. Thinking of just the last four items on this list -- heroin, alcohol, marihuana and tobacco -- which ones, if any, are addictive; that is, anybody who uses it regularly becomes dependent on it and can't get along without it? (CIRCLE NUMBERS FOR AS MANY AS APPLY.)

- 146
- 1 HEROIN
 - 2 ALCOHOL
 - 3 MARIHUANA
 - 4 TOBACCO
 - 5 NONE OF THEM
 - 6 NO OPINION

TAKE BACK CARD A

12. I am going to read you some statements that have been made about marihuana. Please give me your own opinion of each statement by telling whether you mostly agree with it or mostly disagree with it. (ASK AFTER EACH ONE IF NEEDED: Do you mostly agree or mostly disagree with that statement?)

	<u>MOSTLY AGREE</u>	<u>MOSTLY DISAGREE</u>	<u>OTHER ANSWER</u>	<u>NOT SURE</u>	
a. Most people who use marihuana lead a normal life.	1	2	3	4	147
b. Some people have died from using it.	1	2	3	4	148
c. Marihuana helps to relieve some of the tensions of modern life.	1	2	3	4	149
d. It makes people want to try stronger things like heroin.	1	2	3	4	150
e. While people are smoking marihuana they tend to become more sociable.	1	2	3	4	151
f. It makes people lose their desire to work.	1	2	3	4	152
g. Marihuana increases sexual pleasure.	1	2	3	4	153
h. Many crimes are committed by persons who are under the influence of marihuana.	1	2	3	4	154
i. It increases enjoyment of things like music and art.	1	2	3	4	155
j. Using marihuana is morally offensive	1	2	3	4	156
k. It is often promoted by groups who are enemies of the United States.	1	2	3	4	157

13. We also want to know how you feel about liquor like whiskey, brandy, or gin. As I read each statement, think about liquor. First,

	<u>MOSTLY AGREE</u>	<u>MOSTLY DISAGREE</u>	<u>OTHER ANSWER</u>	<u>NOT SURE</u>	
a. Most people who use liquor lead a normal life.	1	2	3	4	158
b. Some people have died from using it.	1	2	3	4	159
c. Liquor helps to relieve some of the tensions of modern life.	1	2	3	4	160
d. It makes people want to try stronger things like heroin.	1	2	3	4	161
e. While people are drinking liquor they tend to become more sociable.	1	2	3	4	162
f. It makes people lose their desire to work.	1	2	3	4	163
g. Liquor increases sexual pleasure.	1	2	3	4	164
h. Many crimes are committed by persons who are under the influence of alcohol.	1	2	3	4	165
i. It increases enjoyment of things like music and art.	1	2	3	4	166
j. Using liquor is morally offensive.	1	2	3	4	167
k. It is often promoted by groups who are enemies of the United States.	1	2	3	4	168

HAND CARD B

14. Read through this card, then tell me which of the things on the card best fit your own idea of what a marihuana user is like. You can give me as many or as few things as you want to, whatever fits your mental picture of a marihuana user. Just give me the numbers. (PROBE: What else fits your picture of the marihuana user? ENCOURAGE THREE OR FOUR RESPONSES IF POSSIBLE. RESPONDENT DOES NOT HAVE TO PICK ONE OF EACH PAIR, JUST WHATEVER HE WANTS TO.)

- | | | | | | |
|-----|----|-------------------------------------|-----|----|--|
| 211 | 1 | TENDS TO BE MALE | 218 | 15 | CHOOSSES FRIENDS THE WAY ANYONE ELSE DOES |
| | 2 | TENDS TO BE FEMALE | | 16 | DOES NOT SHOW GOOD JUDGMENT IN SELECTING FRIENDS |
| 212 | 3 | GOOD RECORD IN SCHOOL | | | |
| | 4 | POOR RECORD IN SCHOOL | 219 | 17 | IS INTERESTED IN THE WORLD AROUND HIM |
| 213 | 5 | YOUNG PERSON | | 18 | DOES NOT CARE MUCH ABOUT THE WORLD AROUND HIM |
| | 6 | OLDER PERSON | | | |
| 214 | 7 | LIKES TO BE WITH OTHER PEOPLE | 220 | 19 | DRINKS A LOT OF LIQUOR |
| | 8 | TRIES TO AVOID OTHER PEOPLE | | 20 | DOES NOT DRINK MUCH LIQUOR |
| 215 | 9 | BORED WITH LIFE | 221 | 21 | USES MANY DIFFERENT DRUGS FOR PLEASURE |
| | 10 | ENJOYS LIFE | | 22 | USES ONLY MARIHUANA FOR PLEASURE |
| 216 | 11 | USUALLY AN AMBITIOUS PERSON | | | |
| | 12 | USUALLY A LAZY PERSON | 222 | 23 | NOT TOO DIFFERENT FROM ME |
| 217 | 13 | A LOT OF PERSONAL PROBLEMS | | 24 | IS A LOT DIFFERENT FROM ME |
| | 14 | AVERAGE NUMBER OF PERSONAL PROBLEMS | | | |
| | | | | X | NO ITEMS PICKED |

TAKE BACK CARD B

Now we would like to turn to some questions about the law.

15. Do you happen to know if the federal government has any laws about marihuana?

- 223
- 1 YES (OR THINK SO) FEDERAL GOVERNMENT HAS LAWS
 - 2 NO, NO MARIHUANA LAWS
 - 3 NOT SURE

16. How about this state? Do you happen to know if this state has any laws about marihuana?

- 224
- 1 YES (OR THINK SO) STATE HAS LAWS
 - 2 NO, NO MARIHUANA LAWS
 - 3 NOT SURE

17. Well, (as you said) this state does have laws about marihuana. We would like your opinion about some things that could be against the law in this state. For example, is having marihuana in your possession against the law or not? (READ EACH ITEM SEPARATELY AND RECORD.)

	<u>YES</u>	<u>NO</u>	<u>NOT SURE</u>	
a. Having marihuana in your possession?	1	2	3	225
b. Selling marihuana. Is that against the law or not?	1	2	3	226
c. Is it against the law to be in the same room with someone when <u>they</u> are smoking marihuana?	1	2	3	227

8. Do you think that the marihuana laws in this state are stricter or not as strict as the marihuana laws in most other states?

- 228 1 THIS STATE STRICTER THAN MOST OTHERS
 2 THIS STATE NOT AS STRICT AS MOST OTHERS
 3 THIS STATE ABOUT SAME AS OTHER STATES
 4 NOT SURE

9. Here are some things that people have said are reasons to make marihuana legal to have and to use. Tell me if you mostly agree or mostly disagree with each of these statements. (READ EACH AND RECORD RESPONSE.)

	<u>MOSTLY AGREE</u>	<u>MOSTLY DISAGREE</u>	<u>NO OPINION</u>	
a. Laws against marihuana are very hard to enforce because most people use it in private.	1	2	3	229
b. So many people are using marihuana that it should be made legal.	1	2	3	230
c. Because of marihuana a lot of young people who are not criminals are getting police records and being put in jail.	1	2	3	231
d. Making marihuana legal would cut down the profits to organized crime.	1	2	3	232
e. It would give the police more time to deal with other things.	1	2	3	233
f. Young people would have more respect for the law if marihuana were made legal.	1	2	3	234
g. It should be up to each person to decide for himself, like with alcohol and tobacco.	1	2	3	235

20. Now here are some reasons that people sometimes give for keeping the marihuana laws the way they are, or for making these laws stricter than they are now. Tell me if you mostly agree or mostly disagree with each of these statements.

	<u>MOSTLY AGREE</u>	<u>MOSTLY DISAGREE</u>	<u>NO OPINION</u>	
a. The laws against marihuana should have stiffer penalties than they do now because that would discourage people from using it.	1	2	3	236
b. If marihuana were made legal it would make drug addicts out of ordinary people.	1	2	3	237
c. If marihuana were legal, it would lead to teenagers becoming irresponsible and wild.	1	2	3	238
d. Strict marihuana laws help our country to keep its moral leadership in the world.	1	2	3	239
e. There are already too many ways for people to escape from their responsibilities. We don't need another one.	1	2	3	240

21. Let's turn from the laws themselves to the way that the police enforce the laws in this community. When it comes to enforcing the marihuana laws in this community, would you say that these laws are pretty strictly enforced, or not enforced very strictly?

241 1 STRICTLY ENFORCED 2 NOT ENFORCED VERY STRICTLY 3 NO OPINION

22. How about the courts in this community which decide on the punishment for people convicted of breaking the drug laws? Do you think the courts are too strict, about right or not strict enough?

242 1 TOO STRICT 2 ABOUT RIGHT 3 NOT STRICT ENOUGH 4 I DON'T KNOW

HAND CARD C

23. These days, as you may know, large numbers of teenagers, college students, and other young adults use marihuana. For the good of the country, which of the possibilities on this list would be the best thing to do about this situation?

- 243 1 HANDLE THE PROBLEM MOSTLY THROUGH THE POLICE AND THE COURTS.
 2 HANDLE THE PROBLEM MOSTLY THROUGH MEDICAL CLINICS.
 3 DON'T WORRY ABOUT THE USE OF MARIHUANA, BUT SPEND TIME AND MONEY ON PREVENTING AND SOLVING OTHER CRIMES.
 4 NO OPINION

TAKE BACK CARD C

HAND CARD D

24. Here is a list of various penalties or punishments that might be given to people convicted of using marihuana. We would like to ask you about penalties in connection with four different people: a teenager the first time it happens; a teenager who has been convicted before; an adult the first time it happens; and an adult who has been convicted before.

Let's take a teenager the first time it happens. Please look over the items on the card and tell me which punishment you think is about right for that. Just give me the number.

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>NO OPINION</u>	
a. Teenager first time	1	2	3	4	5	6	7	8	244
b. How about the penalty for a teenager who has been convicted before?	1	2	3	4	5	6	7	8	245
c. How about the penalty for an adult, the first time it happens?	1	2	3	4	5	6	7	8	246
d. How about the penalty for an adult who has been convicted before?	1	2	3	4	5	6	7	8	247

TAKE BACK CARD D

25. Do you yourself happen to know anyone personally who has been arrested on a charge of selling or using marihuana?

248

- 1 YES, KNOW SOMEONE
- 2 NO, DO NOT KNOW ANYONE
- 3 NOT SURE

26. The marihuana laws in most states mention two kinds of offenses: selling marihuana and possessing marihuana. Do you think the punishment for selling marihuana and for possessing it should be the same, or should there be a difference made between the two, or what?

249

- 1 PUNISHMENT SAME
- 2 SHOULD BE A DIFFERENCE
- 3 NEITHER SELLING NOR POSSESSING SHOULD BE PUNISHED
- 4 NO OPINION

IF "SHOULD BE A DIFFERENCE" ON Q. 26, ASK:

27. What is the difference that you have in mind?

250

- 1 SELLING SHOULD BE PUNISHED MORE
- 2 POSSESSION SHOULD BE PUNISHED MORE
- 3 SELLING SHOULD NOT BE PUNISHED
- 4 POSSESSION SHOULD NOT BE PUNISHED
- 5 OTHER: _____
- 6 NO ANSWER

28. Should there be the same set of drug laws for the whole country, or should each state have its own drug laws?

251

- 1 SAME LAWS FOR WHOLE COUNTRY
- 2 EACH STATE OWN LAWS
- 3 NO OPINION

INTERVIEWER: WHAT FOLLOWS IS A KEY SECTION. READ THE TEXT SLOWLY AND FORCEFULLY AND BE PREPARED TO REPEAT PORTIONS THAT RESPONDENT WANTS TO HEAR AGAIN.

HAND CARD E TO RESPONDENT. GIVE RESPONDENT PLENTY OF TIME TO READ.

29. We would like you to consider five possible things that could happen to marihuana in the future. Please read over this card which has the five different things on it, then I would like to ask you about them.

Now let's go over these possibilities one at a time. I'll review each one with you before I ask about it. The first possibility is that marihuana becomes a regular commercial product. It is sold in stores and in vending machines. It comes under a variety of brand names. It is widely advertised.

Please tell me the statement at the bottom of the card that comes closest to how you would feel about this possibility.

252

- A-1 AN IDEAL SITUATION
- B-2 A GOOD SOLUTION BUT NOT IDEAL
- C-3 ACCEPTABLE TO GIVE A TRY
- D-4 NOT VERY ACCEPTABLE
- E-5 NO GOOD AT ALL
- 6 NO OPINION, NO ANSWER

30. The second possibility is that marihuana becomes a closely regulated product. Again, I'll review this one with you. It is sold only in government licensed stores. You have to be 18 or older to buy it. No advertising is permitted, and no brand names. Just one name, "Marihuana." The government sets quality standards. A continuing government TV campaign and school program teaches the facts, and tells you not to overdo it.

Please tell me the statement at the bottom of the card that comes closest to how you would feel about this possibility.

253

- A-1 AN IDEAL SITUATION
- B-2 A GOOD SOLUTION BUT NOT IDEAL
- C-3 ACCEPTABLE TO GIVE A TRY
- D-4 NOT VERY ACCEPTABLE
- E-5 NO GOOD AT ALL
- 6 NO OPINION, NO ANSWER

31. Here is the third possibility. Possession of marihuana for personal use is not prohibited. You could only have as much as you could use yourself. Selling marihuana as a business is still a crime, especially selling it to anyone under 18. A continuing government TV campaign and school program would teach the facts and say you should not use it.

Please tell me the statement at the bottom of the card that comes closest to how you would feel about this possibility.

- 254 A-1 AN IDEAL SOLUTION
 B-2 A GOOD SOLUTION BUT NOT IDEAL
 C-3 ACCEPTABLE TO GIVE A TRY
 D-4 NOT VERY ACCEPTABLE
 E-5 NO GOOD AT ALL
 6 NO OPINION, NO ANSWER

32. The fourth possibility is that marihuana laws would be just like they are now. Marihuana is not legally available. Police make arrests for sale or possession. Some TV stations and some states have information programs which teach about marihuana and other drugs.

Please tell me the statement at the bottom of the card that comes closest to how you feel about this situation.

- 255 A-1 AN IDEAL SITUATION
 B-2 A GOOD SOLUTION BUT NOT IDEAL
 C-3 ACCEPTABLE TO GIVE A TRY
 D-4 NOT VERY ACCEPTABLE
 E-5 NO GOOD AT ALL
 6 NO OPINION, NO ANSWER

33. The fifth possibility is that marihuana laws are made stricter than they are now. Tougher penalties than now for using or selling it. The full force of the law is used to find people who have or sell it. Continuing government TV campaign and school program teaches the facts, and tells you what the penalties are for being found guilty.

Please tell me the statement at the bottom of the card that comes closest to how you would feel about this possibility happening.

- 256 A-1 AN IDEAL SITUATION
 B-2 A GOOD SOLUTION BUT NOT IDEAL
 C-3 ACCEPTABLE TO GIVE A TRY
 D-4 NOT VERY ACCEPTABLE
 E-5 NO GOOD AT ALL
 6 NO OPINION, NO ANSWER

34. Now, please have another look at the card with the five possibilities on it that we have just talked about. Tell me which one of these five you think would be best for the country. (PAUSE) Now tell me your second choice. (PAUSE) Last, please tell me which one you think would be worst for the country.

	257	258	259
	<u>BEST</u>	<u>SECOND CHOICE</u>	<u>WORST</u>
A REGULAR COMMERCIAL PRODUCT	1	1	1
B CLOSELY REGULATED PRODUCT	2	2	2
C HAVING IT IS NOT PROHIBITED	3	3	3
D LAWS STAY JUST LIKE NOW	4	4	4
E LAWS MADE STRICTER	5	5	5
NO CHOICES MADE	X	X	X

TAKE BACK CARD E

The rest of the questions are just for statistical purposes.

35. In an average week, about how many days do you read a daily paper? (SUNDAY COUNTS)

1 2 3 4 5 6 7 8 NONE 260

36. About how many different magazines did you read or look into for five minutes or more during the past seven days? 261
- 1 NONE
2 ONE OR TWO
3 THREE TO FIVE
4 SIX TO EIGHT
5 NINE OR MORE
6 NOT SURE

37. On how many of the past seven days did you watch a regularly scheduled news program on television?

1 2 3 4 5 6 7 8 NONE 262

38. What is your age? 263
- 1 18 - 25
2 26 - 34
3 35 - 39
4 40 - 49
5 50 - 59
6 60 OR OLDER
7 NO ANSWER

39. What is the last grade that you completed in school? 264
- 1 NO SCHOOLING
2 ELEMENTARY SCHOOL--8TH GRADE OR LESS
3 SOME HIGH SCHOOL
4 HIGH SCHOOL GRADUATE--12TH GRADE
5 SOME COLLEGE
6 COLLEGE GRADUATE OR BEYOND
7 NOW A STUDENT
8 NO ANSWER

IF RESPONDENT NOW A STUDENT, ASK:

40. How far do you expect to go in school? 265
- 1 11TH GRADE OR LESS
2 HIGH SCHOOL GRADUATE
3 SOME COLLEGE
4 COLLEGE GRADUATE
5 GRADUATE WORK BEYOND COLLEGE
6 TRADE OR VOCATIONAL SCHOOL AFTER HIGH SCHOOL
7 DON'T KNOW, NO ANSWER

41. Are you married, widowed, separated, divorced or never married?

266

- 1 NEVER MARRIED
- 2 MARRIED
- 3 WIDOWED
- 4 DIVORCED OR SEPARATED
- 5 NO ANSWER

IF "NEVER MARRIED" SKIP TO Q. 47. IF ANYTHING BUT "NEVER MARRIED," ASK:

42. Do you have any children living here with you?

267

- 1 YES (How many children live here with you? _____)
- 2 NO - SKIP TO Q. 47

43. Please give me the age of each of your children who are living here with you, starting with the oldest and going to the youngest.

AGES OF CHILDREN SEX

311-313	_____	1 M 2 F
314-316	_____	1 M 2 F
317-320	_____	1 M 2 F
321-325	_____	1 M 2 F
326-329	_____	1 M 2 F

44. Now, please tell me the sex of each child, starting with the oldest. (RECORD ABOVE)——

45. Do you have any children who are living away from home at school or college? (Please give me the age and sex of each one.)

330

1 NO

2 YES:

AGE

SEX

331-334	_____	1 M 2 F
335-338	_____	1 M 2 F
339-342	_____	1 M 2 F

46. Do you have any children who are in the armed forces?

343

1 NO

2 YES:

AGE

SEX

344-347	_____	1 M 2 F
348-351	_____	1 M 2 F

47. Is the chief wage earner of this household currently employed?

352

1 YES

2 NO

3 UNEMPLOYED, LOOKING FOR WORK

4 RETIRED

5 NO CHIEF WAGE EARNER

IF "YES," ASK:

48. For what kind of company or business does he work?

INDUSTRY: _____

353-

354

49. What is his particular job and job title? (What are his duties?)

OCCUPATION: _____

50. For statistical purposes, we need to know which of these groups your total family income before taxes for 1970 was in. Include your own income and that of any members of your immediate family who are living with you.

HAND INCOME CARD

Please read me the number.

- 355
- 1 NO INCOME
 - 2 UNDER \$2,000
 - 3 \$2,000 - \$2,999
 - 4 \$3,000 - \$4,999
 - 5 \$5,000 - \$6,999
 - 6 \$7,000 - \$9,999
 - 7 \$10,000 - \$14,999
 - 8 \$15,000 - \$24,999
 - 9 \$25,000 OR MORE
- 0 DON'T KNOW, REFUSED

INTERVIEWER: IF "DON'T KNOW, REFUSED," CIRCLE THE NUMBER NEXT TO "DON'T KNOW" AND THEN CIRCLE THE NUMBER NEXT TO THE CATEGORY THAT GIVES YOUR ESTIMATE.

TAKE BACK INCOME CARD

51. What religion were you raised in, if any? 356
- 1 CATHOLIC
 - 2 JEWISH
 - 3 PROTESTANT
 - 4 OTHER
 - 5 NONE
 - 6 NO ANSWER

IF "PROTESTANT" ON Q. 51, ASK:

52. Which protestant denomination were you raised in?

1 NO ANSWER 357

53. About how often do you attend church or religious services. Do you go to such services regularly, or sometimes, or once in a while, or not at all? 358
- 1 REGULARLY
 - 2 SOMETIMES
 - 3 ONCE IN A WHILE
 - 4 NOT AT ALL
 - 5 NO ANSWER
54. Regardless of your attendance at religious services, do you consider yourself to be deeply religious, fairly religious, or not very religious? 359
- 1 DEEPLY
 - 2 FAIRLY
 - 3 NOT VERY
 - 4 NOT SURE, NO ANSWER

AT THIS POINT, GIVE RESPONDENT SELF-ADMINISTERED QUESTIONNAIRE AND SAY:

We have just a few minutes more and I would like to give you the part that you fill out yourself. Please read the cover page before you begin.

WHEN THE RESPONDENT STARTS ON THE SELF-ADMINISTERED QUESTIONNAIRE, GO ON TO THE NEXT PAGE.

SPECIAL INSTRUCTIONS

While the respondent is working on the self-administered questionnaire, there are a number of small but vital tasks to complete.

1. First, please, without any delay, enter the location number and housing unit number here. Without this identification, the interview cannot be used.

Location number: _____ Housing Unit number: _____

☐

2. The rest of the tasks are (a) to complete the rest of the interview; (b) to prepare the postcard; (c) to edit portions of the interview; and (d) to make a final check of all materials for mailing. Here we go:

- a. Please complete the rest of the questionnaire, then come back to here.
- b. Put the location number and housing unit number on the postcard. Please do it now even if you do not have all of the other information yet for the postcard. Enter all the information you do have on the postcard, and get the rest when the respondent is finished with the questionnaire.
- c. Please review questions #1 and #3 and make sure the handwriting is legible and the ideas complete.
- d. Final check for what gets mailed:
 - (1) In the big envelope respondent should put the self-administered questionnaire, this interview, and the face sheet.
 - (2) The postcard should be completed before you leave the house and mailed by you at the same time as the big envelope.

☐☐☐

Please sign and date below to identify your work and to verify that the interview is accurate and complete to the best of your knowledge.

Interviewer

Date

☐

Did you enter the location number and housing unit number at the top of this page and on the postcard? Please make sure.

☐

Please review each instruction, and "X" the box to show you have done it. _____

Thank you.



55. Sex: 360 1 MALE 2 FEMALE

56. Race: 361 1 WHITE
2 NEGRO
3 PUERTO RICAN OR OTHER LATIN AMERICAN GROUP
4 OTHER: _____

57. What kind of area was this interview conducted in? 362 1 IN A CITY OR TOWN
2 SUBURBS OF A CITY OR TOWN
3 RURAL OR OTHER NONSUBURBAN AREA

58. Indicate the type of neighborhood by circling a number for one of the cat listed below. Consider the whole neighborhood, not just this household.
363 1 WEALTHY, SOCIETY NEIGHBORHOOD. HIGH INCOME AND PROBABLY SOME INHERITED WEALTH.
2 AN EXCELLENT WHITE COLLAR NEIGHBORHOOD. DOCTORS, HIGH PAID EXEC
3 A GOOD WHITE COLLAR NEIGHBORHOOD. NO BIG EXECUTIVES, BUT NO BLU
4 MOSTLY WHITE COLLAR, SOME SKILLED BLUE COLLAR COLLAR CRAFTSMEN A
5 MOSTLY GOOD BLUE COLLAR, SOME OFFICE WORKERS AS WELL.
6 STRICTLY WORKING CLASS. NO WHITE COLLAR.
7 SLUM AREA, PROBABLY MANY FAMILIES ON WELFARE.
8 HARD TO JUDGE.

59. Please estimate the respondent's understanding of the interview:
364 1 NO DIFFICULTY - No language or reading problem
2 JUST A LITTLE DIFFICULTY - Almost no language or reading proble
3 A FAIR AMOUNT OF DIFFICULTY - Some language or reading problem
4 A LOT OF DIFFICULTY - Considerable language or reading proble

60. Cooperation: How cooperative was the respondent -- very cooperative, fai cooperative, not too cooperative, or openly hostile?
365 1 VERY COOPERATIVE
2 FAIRLY COOPERATIVE
3 NOT COOPERATIVE
4 OPENLY HOSTILE

61. Validity: How confident do you feel about the opinions and other informa respondent gave you?
366 1 COMPLETELY CONFIDENT
2 REASONABLY CONFIDENT
3 HAVE SOME DOUBTS
4 HAVE CONSIDERABLE DOUBTS

STATE LAWS

INTERVIEWER: PLEASE GO BACK TO INTERVIEWER INSTRUCTION SHEET WHICH IS THE PAGE JUST BEFORE QUESTION 55.

- 1 No punishment
- 2 A fine (no police record)

- 3 Probation, but no time in jail
- 4 Up to a week in jail
- 5 Up to a year in jail
- 6 More than a year in jail

A police record
would go with
any of these

Response Analysis

Research Park, Route 206
Princeton, New Jersey 08540
(609) 921-3333

QUESTIONNAIRE

This is the part of the interview that you fill out yourself. It does not take long, and it is important to the research.

Most of the questions are multiple choice. To answer them, please draw a circle around the number next to the answer that shows your opinion.

For example:

What is your favorite season of the year?

1 Spring ② Summer 3 Fall 4 Winter

A few questions ask you to write an answer in your own words.

Please remember:

You are in charge of the handling of this interview. When you complete this questionnaire:

1. Put it in the special envelope provided.
2. Put the interview itself into the same envelope.
3. Seal the envelope.
4. Take it to the nearest mailbox with the interviewer and mail it. If you prefer to have the interviewer mail it for you, he or she will be glad to do that.

Please turn the page and begin.

1. Have you ever smoked cigarettes?

411 1 Yes 2 No (Please skip to question 5)

2. Do you smoke cigarettes at the present time?

412 1 Yes 2 No (Please skip to question 5)

3. How many cigarettes do you smoke a day, on the average?

413 1 Five or less a day
 2 About a half a pack a day
 3 About one pack a day
 4 About a pack and a half a day
 5 Two or more packs a day
 6 I do not smoke cigarettes at present

4. Once you had started to smoke regularly, did you ever try to quit or cut down on the number of cigarettes you smoked?

414 1 Yes 2 No

5. During the past 30 days (month) on about how many days did you drink each of the following kinds of alcoholic beverages? (Circle one number for each of the three kinds of beverage.)

	<u>NO DAYS</u>	<u>1-3 DAYS</u>	<u>4 DAYS</u>	<u>5-10 DAYS</u>	<u>11-20 DAYS</u>	<u>21 OR MORE DAYS</u>	<u>NOT SURE</u>	
a. Beer	1	2	3	4	5	6	7	415
b. Wine	1	2	3	4	5	6	7	416
c. Liquor	1	2	3	4	5	6	7	417

6. Please read through the list of things below. Circle a number for each one that you have ever taken for health reasons. A category counts even if you just took one thing in it. _____

	<u>Q. 6</u>	<u>Q. 7</u>
	<u>TOOK FOR HEALTH</u>	<u>TOOK FOR CURIOSITY OR PLEASURE</u>
Non-prescription pain relievers (like aspirin, Bufferin, Excedrin, Anacin, Alka-Seltzer)	1	1
Prescription pain killers (like codeine, morphine)	2	2
Non-prescription tension relievers or sleeping pills (like Sominex, Nytol, Compoz)	3	3
Prescription tension relievers (like Miltown, Librium, Valium)	4	4
Prescription sleeping pills or barbiturates (like nembutal, seconal, "downs")	5	5
Non-prescription pep pills (like Verve, No Doz)	6	6
Prescription stimulants, amphetamines (like dexadrine, benzadrine, "ups," "greenies" and diet pills)	7	7
Methamphetamines (like methedrine, "speed")	8	8
Cocaine	9	9
LSD, mescaline, peyote	10	10
Heroin	11	11
Hashish	12	12

7. Now that you have circled the ones that you have ever taken for health reasons, please go over the list once more, and this time circle the numbers for each category that you have ever taken just out of curiosity or for pleasure. _____

This next set of questions is about marihuana.

8. About how old were you when you first heard or read about marihuana?

_____ (estimated age) 420

9. About how old were you when you first knew someone who had tried marihuana?

1 _____ (estimated age) 421

2 Never knew anyone who had tried it

10. About how old were you when you first felt a bit curious about marihuana and thought that you might try it sometime?

1 _____ (estimated age) 422

2 Never felt curious about it

11. About how old were you when you first had the chance to try marihuana if you wanted to?

1 _____ (estimated age) 423

2 Never had the chance to try it

12. If you did have the chance to try marihuana at that time, did you try it?

1 Yes 2 No 3 Not sure, don't remember 424

13. If you did not try marihuana at that time, when was the first time that you tried marihuana? About how old were you?

1 _____ (estimated age) 425

2 I have not tried it

IF YOU HAVE NEVER TRIED MARIHUANA, ANSWER THE QUESTIONS IN THE BOX BELOW. EVERYONE ELSE PLEASE GO TO QUESTION 17.

14. What are the main reasons you have never tried marihuana? Circle numbers for as many as apply. (Use both columns.)

- | | | | |
|-----|------------------------------|-----|----------------------------|
| 1 | Unavailable -- hard to get | 1 | Fear of damage to mind |
| 2 | Costs too much money | 2 | Fear of becoming an addict |
| 3 | It's illegal | 3 | Pressure from family |
| 426 | 4 It's morally wrong | 427 | 4 Pressure from friends |
| 5 | Don't know about the effects | 5 | Not sure |
| 6 | Fear of being arrested | | |
| 7 | Fear of jail | | |
| 8 | Fear of damage to body | | |

15. If you wanted to use marihuana, do you know where you could get some?

- 1 Yes 2 No 3 Not sure

16. Under what circumstances would you try marihuana? Circle numbers for as many as apply.

- 1 I would try it if I knew where to get some
- 2 I would try it at a gathering of close friends if other people were smoking it and it was offered to me
- 3 I would try it if it were legal
- 4 I would try it if I were outside the United States
- 5 I would not try it under any circumstances

PLEASE SKIP TO QUESTION 25

The next group of questions are about the first time that you used marihuana.

17. The first time you used marihuana, how did you get it?

- 430 1 Bought it
- 2 It was given to me
- 3 Other way (Specify): _____

18. Who first introduced you to marihuana?

- 431 1 A family member
- 2 A friend I knew well
- 3 An acquaintance, someone I knew but not too well
- 4 Someone I had just met through a friend
- 5 A stranger

19. The first time you used marihuana, who were you with? 432
- 1 With no one; was by myself
 - 2 With a family member
 - 3 With one friend
 - 4 With a small group of friends (2-5)
 - 5 With a larger group (6 or more)
 - 6 Other (Specify): _____
20. Where were you the first time you used marihuana? 433
- 1 My parents' home
 - 2 My own home
 - 3 A friend's home
 - 4 A school building
 - 5 A public building
 - 6 A park or beach
 - 7 Other (Specify): _____
21. The first time you used marihuana, was it planned in advance or not? 434
- 1 Yes, planned in advance
 - 2 Not planned in advance
22. What were the main reasons why you tried marihuana? Please circle all the items below that fit you. 435
- 1 To experience something new and exciting
 - 2 To get better insight into myself
 - 3 To get "kicks" or to get "high"
 - 4 To satisfy my curiosity about what it was like
 - 5 To overcome feelings of boredom or depression
 - 6 To give me more pep or energy
 - 7 To relieve anxiety or tension
 - 8 To be more creative
 - 9 To relate better to my friends
 - 10 To expand my awareness and understanding of things
 - 11 Friends or acquaintances pressured me into it
23. On the average, about how often do you use marihuana at the present time? 436
- 1 About once a month or less
 - 2 About two or three times a month
 - 3 About once a week
 - 4 A few times a week
 - 5 About once a day
 - 6 More than once a day
 - 7 I have used marihuana but I don't use it now
24. If you indicated on question 23 that you have used marihuana but you are no longer using it, why did you stop using marihuana? Circle each item below that applies. 437
- | | |
|--------------------------------|---|
| 1 Unavailable -- hard to get | 1 Fear of damage to mind |
| 2 Costs too much money | 2 Fear of becoming an addict |
| 3 It's illegal | 3 Pressure from family |
| 4 It's morally wrong | 4 Pressure from friends |
| 5 Don't know about the effects | 5 I lost interest in it |
| 6 Fear of being arrested | 6 I had a bad experience with marihuana |
| 7 Fear of jail | 7 I started using other drugs |
| 8 Fear of damage to body | 8 Not sure |

THE REST OF THE QUESTIONS ARE FOR EVERYONE TO ANSWER.

25. If marihuana were legal, and available, would you probably: 439
- 1 Try it
 - 2 Use it more than I do now
 - 3 Use it less than I do not
 - 4 Use it about as often as I do now
 - 5 Not use it
 - 6 I don't know what I would do
26. About how many of your friends use marihuana at least once in a while? 440
- 1 More than half
 - 2 About half
 - 3 Less than half
 - 4 Almost none
 - 5 None
 - 6 Don't know
27. From which of these sources do you think the average young person has gotten most of his knowledge and opinions about marihuana? Circle numbers for as many as apply. 441
- 1 From personal experience with it
 - 2 From family members
 - 3 From people outside the family
 - 4 From information programs or booklets at school
 - 5 From a family doctor
 - 6 From religious leaders at church
 - 7 From newspaper and magazine stories
 - 8 From television news or stories
 - 9 From movies
 - 0 I don't know where the average young person learned about it
28. From which of these sources do you think the average young person should get most of his or her knowledge and opinions about marihuana. Circle numbers for as many as apply. 442
- 1 From personal experience with it
 - 2 From family members
 - 3 From people outside the family
 - 4 From information programs or booklets at school
 - 5 From a family doctor
 - 6 From religious leaders at church
 - 7 From newspaper and magazine stories
 - 8 From television news or stories
 - 9 From movies
 - 0 I don't know where the average young person should learn about it
29. Suppose that you happened to find out that a friend was using marihuana regularly. How would you react? 443
- 1 It would not change my feelings about him/her
 - 2 It would make me wonder if there was something wrong with him/her
 - 3 It would make me want to stop being as friendly with him/her
 - 4 It would make him/her more interesting to me
 - 5 I would report him/her to the police
 - 6 I don't know how I would react

30. Let's say that you were the owner of a business. One day you learned that one of your good employees was a regular marihuana user, but smoked it after hours, not on the job. What would your reaction probably be? Circle one answer.

- 444 1 None of my business as long as it did not affect his work
 2 I would talk with him and ask him to stop
 3 I would dismiss him from the company
 4 I don't know what I would do

31. If you found that one of your 12 to 20 year old children was smoking marihuana with friends, what would you probably do?

- 445 1 I would report him/her to the police.
 2 I would punish him/her.
 3 I would not forbid, but would try to discourage him/her from doing it again.
 4 I would not discourage, but would simply discuss the pros and cons.
 5 I would not do anything.
 6 I don't know what I would do.

32. If a youngster of yours, age 12 to 20, was arrested for a marihuana offense, what do you think your reaction might be?

- 446 1 It would be the best way to teach him a lesson.
 2 I would be very upset because of the police record that goes with it.
 3 I would do everything I could to get him off.

33. Here are some "sins" or "vices" as some people think of them, which are against the law. They are different from other crimes because the people who do them are willingly involved. Please read through the list and indicate for each one if you think it should or should not be against the law.

	<u>SHOULD BE AGAINST THE LAW</u>	<u>SHOULD NOT BE AGAINST THE LAW</u>	<u>NOT SURE</u>	
Gambling	1	2	3	447
Abortion	1	2	3	448
Attempted suicide	1	2	3	449
Prostitution	1	2	3	450
Homosexuality	1	2	3	451
Using marihuana	1	2	3	452

34. The rest of the questions are about the interview and this questionnaire, the whole thing. First, are you glad you were interviewed or do you wish you had not taken the time for it?

- 453 1 Glad
 2 Wish I had not taken the time
 3 Not sure

35. During the interview or in this questionnaire, about how often did you hold back and not answer the questions completely or honestly?

- 454 1 Held back a lot
 2 Held back some of the time
 3 Held back a little of the time
 4 Did not hold back at all
 5 I prefer not to answer this question

36. At times when you held back or did not answer the questions the way you felt, was it mostly in connection with the interview or mostly in connection with the questionnaire you just filled out?

- 455 1 Interview
 2 This questionnaire
 3 Both
 4 My answer does not fit the above categories

37. Have you had a different amount of experience with marihuana (either more or less) than you have indicated up to now?

- 456 1 Yes, I have had more than I indicated
 2 Yes, I have had less than I indicated
 3 No
 4 I prefer not to answer this question

38. How about the interviewer? Did anything about the interviewer make you less honest than you would have been with a different interviewer, or would you have given the same answers to an interviewer whom you trusted completely? (Your answer will not affect the interviewer's job in any way.)

- 457 1 Made me less honest than I would have been
 2 Did not make me less honest than I would have been
 3 Not sure what effect interviewer had
- — — —

Thank you for your cooperation. This is an important piece of research and your help is very much appreciated.

Please: - Put this questionnaire into the special envelope.
 - Also put the completed interview form into the envelope.
 - Seal the envelope. Take it to a mailbox with the interviewer, or if you prefer, give it to the interviewer to mail for you.

Today's date: _____

Response Analysis

Research Park, Route 206
Princeton, New Jersey 08540
(609) 921-3333

QUESTIONNAIRE

We are asking you to be a part of the first nationwide survey of its kind being done among persons in your age group. Your help is very much appreciated.

We think you will find the questions interesting and enjoyable.

Some of the questions are personal. To make sure that you can be completely free and honest in what you say, the interviewer will tell you about the system we are using so that no one can match up your name with your answers.

The questions are easy and enjoyable, and go fast. Most of them are multiple choice. To answer these questions, just draw a circle around the number next to the answer that shows your opinion.

For example:

What is your favorite season of the year?

1 Spring ② Summer 3 Fall 4 Winter

A few questions ask you to write an answer in your own words.

When you are through:

1. Put this questionnaire into the envelope which the interviewer will give you.

2. Seal the envelope.

3. Take it to the nearest mailbox with the interviewer and mail it. If you prefer to have the interviewer mail it for you, he or she will be glad to do that.

Thank you very much.

Date: _____ Code Number: _____

Please turn the page and begin.

3. Please write the name of the state that you live in: _____ 530-531

4. Which of the following describes you:

- 1 White 532
- 2 Negro, Black
- 3 Puerto Rican, Mexican, or other Latin
- 4 Other background

5. The next questions are about issues that are in the news. Please circle a number to show how you feel about each one.

	<u>YES</u>	<u>NO</u>	<u>DEPENDS</u>	<u>NOT SURE, NO OPINION</u>	
a. Should a policeman be able to go into a house to look for evidence, without having to get a search warrant?	1	2	3	4	533
b. Should any adult who wants to, have the right to own a pistol?	1	2	3	4	534
c. Should a policeman be able to stop and search a person on the street if he thinks that person looks suspicious?	1	2	3	4	535
d. Should people be allowed to make speeches against God?	1	2	3	4	536
e. Should newspapers have the right to print articles which criticize the police?	1	2	3	4	537
f. Should people be allowed to publish books that attack our system of government?	1	2	3	4	538

12. Here is a list of various drugs, medicines and other substances. Please read through the list and circle a number in the first column for each one that you have heard of. A category counts if you have heard of one or more things in it.

	539-540	541-542
	<u>Q. 12</u>	<u>Q. 13</u>
	<u>HAVE</u> <u>HEARD OF</u>	<u>CAN BE</u> <u>HARMFUL</u>
1 Amphetamines (such as dexadrine, "pep pills," benzadrine, "ups," "greenies")	1	1
2 Methamphetamines (such as methedrine, "speed")	2	2
3 Pain relievers (such as aspirin, Bufferin, Excedrin, Anacin, Alka-Seltzer)	3	3
4 Pain killers (such as codeine, morphine)	4	4
5 Tension relievers or tranquilizers (such as Miltown, Librium, Valium)	5	5
6 Barbiturates (such as nembutal, seconal, "downs")	6	6
7 Cocaine	7	7
8 LSD or mescaline or peyote	8	8
9 Heroin ("smack," "skag")	9	9
10 Alcohol (such as liquor, wine, beer)	10	10
11 Marihuana ("pot," "grass," "reefers")	11	11
12 Tobacco (such as cigarettes, cigars)	12	12

13. Now please read through the list again and circle the number of each item that you think can be harmful to people who use them, even in small amounts.

14. Thinking of just four items -- heroin, alcohol, marihuana and tobacco -- which ones, if any, are addictive; that is, anybody who uses it regularly becomes dependent on it can't get along without it? Circle numbers for as many as apply.

543

- 1 Heroin
- 2 Alcohol
- 3 Marihuana
- 4 Tobacco
- 5 None of them are addictive
- 6 No opinion

15. Here are some statements that have been made about marihuana. Please give your own opinion of each statement by showing whether you mostly agree with it or mostly disagree with it. Circle one number for each statement.

	<u>MOSTLY AGREE</u>	<u>MOSTLY DISAGREE</u>	<u>OTHER ANSWER</u>	<u>NOT SURE</u>	
a. Most people who use marihuana lead a normal life.	1	2	3	4	544
b. Some people have died from using it.	1	2	3	4	545
c. Marihuana helps to relieve some of the tensions of modern life.	1	2	3	4	546
d. It makes people want to try stronger things like heroin.	1	2	3	4	547
e. While people are smoking marihuana they tend to become more sociable	1	2	3	4	548
f. It makes people lose their desire to work.	1	2	3	4	549
g. Marihuana increases sexual pleasure.	1	2	3	4	550
h. Many crimes are committed by persons who are under the influence of marihuana.	1	2	3	4	551
i. It increases enjoyment of things like music and art.	1	2	3	4	552
j. Using marihuana is morally offensive.	1	2	3	4	553
k. It is often promoted by groups who are enemies of the United States.	1	2	3	4	554

16. The following questions are about the marihuana laws. We would like your opinion about some things that could be against the law in this state. For each of the three things listed below, circle one number to show whether you think it is against the law in this state.

	<u>YES</u>	<u>NO</u>	<u>NOT SURE</u>	
a. Having marihuana in your possession?	1	2	3	555
b. Selling marihuana. Is that against the law or not?	1	2	3	556
c. Is it against the law to be in the same room with someone when <u>they</u> are smoking marihuana?	1	2	3	557

17. Do you think that the marihuana laws in this state are stricter or not as strict as the marihuana laws in most other states?

- 558 1 This state stricter than most others
 2 This state not as strict as most others
 3 This state about the same as other states
 4 Not sure

18. Here are some things that people have said are reasons to make marihuana legal to have and to use. For each statement, circle one number to show if you mostly agree or mostly disagree with it.

	<u>MOSTLY AGREE</u>	<u>MOSTLY DISAGREE</u>	<u>NO OPINION</u>	
a. Because of marihuana a lot of young people who are not criminals are getting police records and being put in jail	1	2	3	559
b. Making marihuana legal would give the police more time to deal with other things	1	2	3	560
c. Young people would have more respect for the law if marihuana were made legal	1	2	3	561
d. It should be up to each person to decide for himself, like with alcohol and tobacco	1	2	3	562

19. These days, as you may know, large numbers of teenagers, college students, and other young adults use marihuana. For the good of the country, which of the following courses of action would be the best thing to do about this situation?

- 563 1 Handle the problem mostly through the police and the courts.
 The process of arrest, conviction, punishment.
 2 Handle the problem mostly through medical clinics. The
 process of diagnosis, treatment, cure.
 3 Don't worry about the use of marihuana, but spend time
 and money on preventing and solving other crimes.
 4 No opinion

20. The next question is about the penalties that might be given to four kinds of people who are convicted of using marihuana. Please give us your opinion of which penalty comes closest to what you think is right.
- a. A teenager is convicted of using marihuana. It is his first offense. 564
- 1 No punishment
 - 2 A fine (but no police record)
 - 3 Probation (and a police record)
 - 4 Up to a week in jail (and police record)
 - 5 Up to a year in jail (and police record)
 - 6 More than a year in jail (and police record)
 - 7 I don't know what is right
- b. A teenager is convicted of using marihuana. He has been convicted before. It is not his first offense. 565
- 1 No punishment
 - 2 A fine (but no police record)
 - 3 Probation (and a police record)
 - 4 Up to a week in jail (and police record)
 - 5 Up to a year in jail (and police record)
 - 6 More than a year in jail (and police record)
 - 7 I don't know what is right
- c. An adult is convicted of using marihuana. It is his first offense. 566
- 1 No punishment
 - 2 A fine (but no police record)
 - 3 Probation (and a police record)
 - 4 Up to a week in jail (and police record)
 - 5 Up to a year in jail (and police record)
 - 6 More than a year in jail (and police record)
 - 7 I don't know what is right
- d. An adult is convicted of using marihuana. He has been convicted before. It is not his first offense. 567
- 1 No punishment
 - 2 A fine (but no police record)
 - 3 Probation (and a police record)
 - 4 Up to a week in jail (and police record)
 - 5 Up to a year in jail (and police record)
 - 6 More than a year in jail (and police record)
 - 7 I don't know what is right
21. Do you yourself happen to know anyone personally who has been arrested on a charge of selling or using marihuana? 568
- 1 Yes, know someone
 - 2 No, do not know anyone
 - 3 Not sure
22. The marihuana laws in most states mention two kinds of offenses: selling marihuana and possessing marihuana. Do you think the punishment for selling marihuana and for possessing it should be the same, or should there be a difference made between the two, or what? 569
- 1 Punishment should be the same
 - 2 Selling should be punished more
 - 3 Possession should be punished more
 - 4 Selling should not be punished
 - 5 Possession should not be punished
 - 6 Neither selling nor possessing should be punished
 - 7 I am not sure

This last section asks about things that you do. These questions are much easier to answer. Please do a careful job.

23. Have you ever smoked cigarettes?

- 611 1 Yes
 2 No (Please skip to question 27)

24. Do you smoke cigarettes at the present time?

- 612 1 Yes
 2 No (Please skip to question 27)

25. How many cigarettes do you smoke a day, on the average?

- 613 1 Five or less a day
 2 About a half a pack a day
 3 About one pack a day
 4 About a pack and a half a day
 5 Two or more packs a day
 6 I do not smoke cigarettes at present

26. Once you had started to smoke regularly, did you every try to quit or cut down on the number of cigarettes you smoked?

- 614 1 Yes
 2 No

27. During the past 30 days (month) on about how many days did you drink each of the following kinds of alcoholic beverages? Circle one number for each of the three kinds of beverage.

	<u>NO DAYS</u>	<u>1-3 DAYS</u>	<u>4 DAYS</u>	<u>5-10 DAYS</u>	<u>11-20 DAYS</u>	<u>21 OR MORE DAYS</u>	<u>NOT SURE</u>	
a. Beer	1	2	3	4	5	6	7	615
b. Wine	1	2	3	4	5	6	7	616
c. Liquor	1	2	3	4	5	6	7	617

28. Please read through the list of things below. Circle a number for each one that you have ever taken for health reasons. A category counts even if you just took one thing in it.

	Q. 28	Q. 29	
	TOOK FOR HEALTH	TOOK FOR CURIOSITY OR PLEASURE	
Non-prescription pain relievers (like aspirin, Bufferin, Excedrin, Anacin, Alka-Seltzer)	1	1	
Prescription pain killers (like codeine, morphine)	2	2	
Non-prescription tension relievers or sleeping pills (like Somnex, Nytol, Compoz)	3	3	
Prescription tension relievers (like Miltown, Librium, Valium)	4	4	
Prescription sleeping pills or barbiturates (like nembutal, seconal, "downs")	5	5	618
Non-prescription pep pills (like Verve, No Doz)	6	6	619
Prescription stimulants, amphetamines (like dexadrine, benzadrine, "ups," "greenies" and diet pills	7	7	
Methamphetamines (like methedrine, "speed")	8	8	
Cocaine	9	9	
LSD or mescaline or peyote	10	10	
Heroin ("smack," "skag")	11	11	
Hashish	12	12	

29. Now that you have circled the ones that you have ever taken for health reasons, please go over the list once more, and this time circle the numbers for each category that you have ever taken just out of curiosity or for pleasure.

This next set of questions is about marihuana.

30. About how old were you when you first heard or read about marihuana _____(estimated age) 620
31. About how old were you when you first knew someone who had tried marihuana? _____(estimated age) 621
1 Never knew anyone who tried it
32. About how old were you when you first felt a bit curious about marihuana and thought that you might try it sometime? _____(estimated age) 622
1 Never felt curious about it
33. About how old were you when you first had the chance to try marihuana if you wanted to? _____(estimated age) 623
1 Never had the chance to try it
34. If you did have the chance to try marihuana at that time, did you try it?
1 Yes 2 No 3 Not sure, don't remember 624
35. If you did not try marihuana at that time, when was the first time that you tried marihuana? About how old were you? _____(estimated age) 625
1 I have not tried it

IF YOU HAVE NEVER TRIED MARIHUANA, ANSWER THE QUESTIONS IN THE BOX BELOW. EVERYONE ELSE PLEASE GO TO QUESTION 39.

36. What are the main reasons you have never tried marihuana? Circle numbers for as many as apply. (Use both columns.)

- | | | | |
|-----|--------------------------------|-----|------------------------------|
| 626 | 1 Unavailable -- hard to get | 627 | 1 Fear of damage to mind |
| | 2 Costs too much money | | 2 Fear of becoming an addict |
| | 3 It's illegal | | 3 Pressure from family |
| | 4 It's morally wrong | | 4 Pressure from friends |
| | 5 Don't know about the effects | | 5 Not sure |
| | 6 Fear of being arrested | | |
| | 7 Fear of jail | | |
| | 8 Fear of damage to body | | |

37. If you wanted to use marihuana, do you know where you could get some?

- 1 Yes 2 No 3 Not sure

628

38. Under what circumstances would you try marihuana? Circle numbers for as many as apply.

- 1 I would try it if I knew where to get some
- 2 I would try it at a gathering of close friends if other people were smoking it and it was offered to me
- 3 I would try it if it were legal
- 4 I would try it if I were outside the United States
- 5 I would not try it under any circumstances

629

PLEASE SKIP TO QUESTION 47

45. On the average, about how often do you use marihuana at the present time?

- 636 1 About once a month or less
 2 About two or three times a month
 3 About once a week
 4 A few times a week
 5 About once a day
 6 More than once a day
 7 I have used marihuana but I don't use it now

46. If you indicated on question 45 that you have used marihuana but you are no longer using it, why did you stop using marihuana? Circle each item below that applies. (Use both columns.)

- | | | | |
|-----|--------------------------------|-----|---|
| 637 | 1 Unavailable -- hard to get | 638 | 1 Fear of damage to mind |
| | 2 Costs too much money | | 2 Fear of becoming an addict |
| | 3 It's illegal | | 3 Pressure from family |
| | 4 It's morally wrong | | 4 Pressure from friends |
| | 5 Don't know about the effects | | 5 I lost interest in it |
| | 6 Fear of being arrested | | 6 I had a bad experience with marihuana |
| | 7 Fear of jail | | 7 I started using other drugs |
| | 8 Fear of damage to body | | 8 Not sure |

THE REST OF THE QUESTIONS ARE FOR EVERYONE TO ANSWER.

47. If marihuana were legal, and available, would you probably:

- 639 1 Try it
 2 Use it more than I do now
 3 Use it less than I do now
 4 Use it about as often as I do now
 5 Not use it
 6 I don't know what I would do

48. About how many of your friends use marihuana at least once in a while?

- 640 1 More than half
 2 About half
 3 Less than half
 4 Almost none
 5 None
 6 Don't know

49. From which of these sources do you think the average young person should get most of his or her knowledge and opinions about marihuana? Circle numbers for as many as apply.

- 641 1 From personal experience with it
 2 From family members
 3 From people outside the family
 4 From information programs or booklets at school
 5 From a family doctor
 6 From religious leaders at church
 7 From newspaper and magazine stories
 8 From television news or stories
 9 From movies
 0 I don't know where the average young person should learn about it

50. Suppose that you happened to find out that a friend was using marihuana regularly. How would you react?
- 642 1 It would not change my feelings about him/her
2 It would make me wonder if there was something wrong with him/her
3 It would make me want to stop being as friendly with him/her
4 It would make him/her more interesting to me
5 I would report him/her to the police
6 I don't know how I would react
51. If you were a parent and found that one of your 12 to 20 year old children was smoking marihuana with friends, what would you probably do?
- 643 1 I would report him/her to the police
2 I would punish him/her
3 I would not forbid, but would try to discourage him/her from doing it again
4 I would not discourage, but would simply discuss the pros and cons
5 I would not do anything
6 I don't know what I would do
52. If a youngster of yours, age 12 to 20, was arrested for a marihuana offense, what do you think your reaction might be?
- 644 1 It would be the best way to teach him a lesson
2 I would be very upset because of the police record that goes with it
3 I would do everything I could to get him off

Thank you very much for your help on this research project.

Now please do the following:

1. Put this questionnaire into the envelope that the interviewer gives you.
2. Help the interviewer fill out the verification postcard.
3. Go to the nearest mailbox with the interviewer to mail the envelope and the postcard. If you prefer, the interviewer will mail it for you.

Thank you again.

PUBLIC ATTITUDES TOWARD MARIHUANA

Part 3

Methods and Procedures

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A Nationwide Study of Beliefs, Information and Experience

Prepared for the

National Commission on Marihuana and Drug Abuse

Response Analysis Corporation
Princeton, New Jersey

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I. Introduction

This is Part 3 of a four-part report. In this volume we provide detailed information on the research experience, together with source materials (such as communications to interviewers) which are part of conducting the study.

The other parts of the report are these:

Part 1. Main findings and conclusions

Part 2. Detailed tabulations; the data base for the findings

Part 4. A magnetic tape record of the data

We assume that this report on methodology is addressed to researchers and others who are comfortable with social research procedures. Accordingly, the contents of this report are somewhat briefer, with less text material, than they would be for a general audience.

The next three sections of this introduction are taken from the introduction to the main report, and are a quick overview of what we did. More detailed explanations of procedures occupy the remainder of this document.

Research plan

Assembling and developing issues and hypotheses, constructing and pretesting questioning instruments, and preparing an interviewer's manual occupied a ten week period starting late in June.

This phase was substantially helped by the opportunity to meet several times with Commission staff and with consultants whose own research experience helped to shape the present study.

Two other activities marked the developmental period: one was a review of literature on marihuana, including questionnaires and reports from other drug-related studies. The other activity was conducting and analyzing two group interviews, one with working class adults, one with young adults, age 18-25.

The developmental work was the prelude to constructing and formatting questioning instruments, pretesting those instruments (in New Jersey, Philadelphia, and Detroit), preparing and training interviewers for this assignment, and in completing the main part of the research -- quantifiable interviews and an analysis of them.

Sampling and interviewing

The study design called for data from a nationwide probability sample of adults, and a sample of young people age 12-17. The experience for adults consisted of both a face-to-face interview and the completion of a self-administered questionnaire. The experience for the sample age 12-17 consisted of completion of a self-administered questionnaire. Interviewers were in the room with respondents when the questionnaires were being filled out.

The study design called for three activities:

- The interviews plus questionnaires with 2,000 adults age 18 and older.
- The questionnaires with 400 - 500 young people age 12-17.

These two activities constitute the basis for this report.

- Enough additional interviews and questionnaires with adults in three specified areas to provide a sample of 200 adults each in the District of Columbia; Cook County, Illinois; and Omaha, Nebraska. Data from these subsamples are reported separately in connection with another Commission project.

However, some of the District of Columbia and Cook County interviews, beyond what was gathered for the basic study, are included in the tabulations for this report, and appropriately weighted to reflect their importance in the population.

Actually utilized in this report: data from 2,405 adults and 781 youth age 12-17.

Interviews were conducted during September and October 1971.

Eligibility for interview. Because of the importance of young adults to this study, and because of the disproportionately high number of older people in the population, some adjustments were made in the sample design. Adults 18-34 were oversampled and adults 35 and older were undersampled.

The sample of young people age 12-17 includes one from any household where there was also an eligible adult (eligibility defined as above) and one from other households where there was no eligible adult. Thus in some households, data was collected from two persons (one an adult, one a young person age 12-17). In other households, data was collected from one person, either an adult or someone age 12-17.

II. Sample Design

Summary

The Response Analysis Corporation national probability sample was used for this study, augmented by supplementary samples of residents in the areas of three cities (Chicago, Omaha, and Washington, D.C.). Sample locations and households, and specific individuals to be interviewed, were specified by the sampling plan and by explicit instructions to the interviewers. None of the selection steps was left to the discretion of the interviewer.

A number of study requirements were merged in the sample design, including:

- A basic national sample of adults, age 18 and over.
- A supplementary sample of adults in the Chicago area (Cook County), Omaha area (Douglas County), and Washington, D. C. metropolitan area.
- A national sample of youth, age 12 to 17 (no supplementary youth sample was assigned for the three metropolitan areas).

Within the adult samples, probability procedures were used to set selection rates for younger adults, age 18 to 34, at a higher level than those for adults age 35 or older. This was done in order to provide a larger base of younger adults for the study analysis.

The "oversampling" of younger adults was compensated by appropriate weights in the computer processing of study results so that total survey results reflect the actual distribution of younger and older adults in the study population.

The sequence of steps used in the development of the sample included:

Selection of a national sample of 103 primary areas (counties or groups of counties) stratified by geographic region, type of community, and other population characteristics.

Selection of approximately 200 interviewing locations, or secondary areas (Census enumeration districts or block groups) for the national sample, and 25 interviewing locations in each of the three metropolitan locations used for supplementary adult samples.

Field counts by trained interviewers to divide interviewing locations into sample segments of 10 to 25 housing units.

Selection of specific sample segment in each interviewing location for field administration of the survey.

Prelistings of housing unit addresses in most sample segments selected for this study. (This step was omitted in 38 national sample locations that were primarily rural "open country" areas in which prelistings do not normally provide addresses that are adequate for mailing purposes. In these locations, housing units were listed concurrently with the interviewing phase of the study.)

Selection of specific housing unit addresses to be contacted for the survey, and an advance mailing of a letter urging cooperation.

Interviewer visit to each sample household to obtain listings of residents in eligible age ranges.

Random selection, using a specific scheme assigned for each sample household, of persons to be interviewed (in any one household, the number of persons designated as part of the study sample was none, one, or two).

Detail on each of these steps is provided in the remainder of this section.

Selection of sample areas for national sample

Primary areas were selected as follows:

1. The entire area of the coterminous United States was first divided into approximately 1,140 primary sampling units (PSU's). Each PSU is a well-defined geographic unit, usually a county or a group of counties with a minimum population of 50,000 in 1970. PSU's are of two general types: (1) metropolitan areas, or parts of metropolitan areas; and (2) other areas.
2. Thirty-eight large PSU's were included in the sample as self-representing primary areas. These include the 25 largest metropolitan areas in the United States.
3. All other PSU's were grouped into 65 strata, with an average stratum population of approximately 2,000,000 persons in 1970. Basic criteria used in the stratification procedure were:

Geographic division (within a stratum, all PSU's are in the same Census geographic division).

Metropolitan or non-metropolitan character (with the exception of a few counties, strata consist entirely of metropolitan areas or entirely of other counties).

These two stratification features are employed in regional and community-size analysis.

Additional stratification criteria included population density, rate of population growth, and industrial characteristics.

4. One PSU was selected with probability proportionate to population size from each of the 65 strata that included two or more PSU's.

Each of the 103 primary areas (38 selected as self-representing areas, plus 65 selected as a result of the stratification procedure) is a relatively heterogeneous area. Most include city, town, suburban and rural residents. Some are primarily small town or rural but are several counties in size.

Within the 103 primary areas we have defined and selected 600 secondary areas or specific sample locations. Secondary areas in the RAC sample are areas of approximately 2,500 population in 1970. A secondary area may be as small geographically as a block or two in a densely populated portion of a city or it may be an entire county or even larger in a sparsely populated rural area.

Secondary areas usually consist of a number of administrative units used in the Census -- either enumeration districts or block groups. Census microfilm records have been used to define and select secondary areas. These units were selected with probability proportionate to population size.

A subsample of approximately 200 interviewing locations were selected for this study.

Selection of interviewing locations for supplementary metropolitan samples

Census data for 1970 were used to stratify and select block groups for the supplementary metropolitan area samples.

Block groups were first stratified by location within the area -- inside or outside the central city (for the Washington, D.C. area, those outside the District of Columbia were further stratified according to Maryland or Virginia location). A preliminary sample of 100 block groups in each metropolitan area was then selected with probability proportionate to number of households. Block groups selected in this preliminary phase were 4 times the number desired for the final sample. These block groups were then divided into two listings according to proportion of nonwhite residents (50% or more nonwhite, or less than 50% nonwhite) and arranged within each listing by estimated average value of housing unit. In each metropolitan area, systematic random selections of 25 block groups were then made from the array of 100 block groups in the preliminary selection.

Segment and housing unit assignments

For both the national sample and the supplementary metropolitan area samples, trained interviewers were assigned to make rough field counts, usually in segments of about 10 to 25 housing units, to divide block groups and enumeration districts into administratively convenient survey units. Detailed maps, instructions, and count sheets were provided for those assignments. Segments were clearly defined geographic units bounded by streets, roads, streams, or other landmarks, or by specific starting and stopping addresses. For the national sample, most counting assignments were completed in April-May 1971. For the supplementary metropolitan areas, counts were completed in August 1971.

Probability procedures were used to select one or more segments -- usually including a total of about 25 to 40 housing units -- for this survey for each interviewing location.

In all of the supplementary metropolitan locations and in most of the national sample locations, interviewers were then assigned to do prelistings of housing unit addresses in the selected sample segments. The prelistings were intended in part to provide close central office control over selection of the final sample of households and in part to permit the mailing of a letter in advance of the interviewer visits to sample households. Prelistings were not assigned, however, in 38 national sample interviewing locations that were

primarily rural open-country areas in which listings normally provide descriptions of the housing unit and its location (e.g., "brick house north of church") but not addresses that are adequate for postal purposes. In these locations, housing units were listed concurrently with the interviewing phase of the study, and housing units to be included in the sample were designated by marked lines on the housing unit listing sheets.

In prelisted locations, the final sample of housing units was randomly selected in the Princeton survey office. Letters were addressed to sample households and mailed a day or two before interviewers received their assignments.

Probability procedures used for the selection of sample areas, interviewing locations, segments and housing units were such that for the national sample each housing unit in the coterminous United States had the same overall probability of selection. Similarly, within each of the three metropolitan areas used for the supplementary samples, housing units were given an equal probability of selection.

Procedure within sample housing units, adult samples

A "face sheet" for each sample housing unit provided the interviewer with a prescribed series of steps for obtaining a listing of residents of the household and the selection of respondents within eligible age ranges. To accomplish the oversampling of adults age 18 to 34, household composition was ascertained and households were classified in three groups, with different selection procedures for each group:

<u>Household Composition</u>	<u>Selection Procedure*</u>
One or more persons, 18-34; none 35 or older	Selection in all households from 18-34 group
One or more persons 18-34; <u>and</u> one or more 35 or older	Selection in 2/3 of households from 18-34 group; in 1/3 of households from 35 or older group
No one 18-34; one or more 35 or older	Selection in 1/2 of households from 35 or older group; no adult selected from other 1/2 of households

If there was only one person in the adult age group selected for interview, that person was the designated respondent. If there were two or more adults in the age group selected for interview, each eligible person was assigned a number, starting with males from oldest to youngest, then females from oldest to youngest. A random number selection table then indicated which of the adults was to be interviewed.

Probabilities of selection thus varied with the composition of the household, for different age groups, and with the number of residents within the selected age group. Weighting procedures were used to compensate for differences in selection rates; in general, the weights were inversely proportionate to the probabilities of selection.

*The selection proportions were accomplished by multiple forms of the face sheet.

Selection of youth sample

In sample locations other than those in the three supplementary metropolitan area samples, interviewers determined whether the household included one or more young people in the 12-17 age range. Whether or not an adult was interviewed, persons age 12-17 were listed on a special face sheet provided for that purpose. When there was only one such person in the household, that person was designated as the respondent. When there was more than one person age 12-17, numbers were assigned and one person randomly designated for interview as in the case of the adult sample.

In the Chicago and Washington, D.C. metropolitan area samples, youth interviews were assigned for only a random subgroup of the housing units in the sample. The fraction of housing units included in the subgroup was the number that normally would have been included in those areas as part of the Response Analysis national sample. No youth sample was assigned in the Omaha area since that is not a Response Analysis national sample area.

III. Interviewer Training

A. Schedule notes

The study utilized 236 interviewers, nearly all of whom participated in one day training meetings. Eight Response Analysis trainers included the study director for this research, and other professional staff members, as well as people whose regular job is interviewer supervision.

A training conference for trainers was held at Response Analysis on September 9, 1971.

A demonstration training session was held at the Nassau Inn in Princeton on September 10. Present were the people who were to train interviewers the following week. A group of interviewers from Philadelphia was present, and they were trained for their assignments on that day. There were opportunities for suggestions and advice from the observers during the course of training, and a lengthy critique followed the end of training. This demonstration day yielded many useful and a few vital outcomes which were implemented during the regular training period that followed.

B. Schedule for regional training meetings

<u>Trainer</u>	<u>September 13</u>	<u>September 15</u>	<u>September 17</u>
Abelson	Boston		
Bullock	Detroit	Cincinnati	Cleveland
Heaton	Baltimore		
Todd		Kansas City (Mo.)	St. Louis
Rickwell	Jacksonville	Houston	Dallas
Schrayer		New York City	New York/ New Jersey
McCarthy	Nashville	Gadsden	Charlotte
Michaelson	Los Angeles	San Francisco	Seattle
	<u>September 22</u>	<u>September 23</u>	
Schrayer	Chicago		
Heaton	Washington, D. C.		
Todd		Omaha	

C. Interviewer responses to selected questions

At the start of personal training, before ideas or information were exchanged, interviewers were asked to complete a portion of the adult interview. They completed it as a self-administered task. The main purpose of this exercise was to have some way of gauging extent of difference between interviewers and adult respondents in the study.

Altogether, 210 interviewers filled out the portion assigned (Questions 9-29, adult interview), put it into an envelope, and handed it in to the trainer before the formal training period began. Some interviewers -- 26 -- did not participate in this exercise. This happened when a session began later than scheduled and the trainer wanted to start with the more formal training period.*

The following pages are a selection of data for interviewers on key attitude and belief items. Findings for all adults are also shown. Interviewer responses by region are included, but of doubtful reliability because of small subsample sizes.

Our main conclusion from comparing interviewers with others is that interviewers feel differently, but not very differently, from other adults in the population.

Here are the tendencies. Compared with other adults, interviewers are:

- A little more receptive, a little less resistant, to marihuana
- A little more cautious in expressing a belief (as reflected in the "no opinion" responses)

It is the greater degree of caution, expressed in a higher proportion of "no opinion" responses, that accounts in part for the lower proportion of interviewers than others who "agree" with the belief statements.

*Or for those interviewers who were trained by telephone.

Extent of agreement with belief statements about marihuana. (Q. 12)

	All adults	Inter- viewers	Interviewers by region			
			North- east	North Central	South	West
<u>Agree</u> that . . .	2405	210	40	77	52	21
a. Marihuana makes people want to try stronger things like heroin	70%	58%	50%	58%	75%	33%
b. Using marihuana is morally offensive	64	43	38	39	67	29
c. It makes people lose their desire to work	59	40	35	39	48	29
d. Many crimes are committed by persons who are under the influence of marihuana	56	36	13	39	54	33
e. Some people have died from using it	48	24	15	29	29	14
f. It is often promoted by people who are enemies of the United States	45	30	13	31	50	19
g. It increases enjoyment of things like music and art	45	30	30	30	17	38
h. Marihuana helps to relieve some of the tensions of modern life	43	46	45	47	42	52
i. While people are smoking marihuana they tend to become more sociable	39	32	35	33	31	29
j. Marihuana increases sexual pleasure	24	14	10	14	10	19
k. Most people who use marihuana lead a normal life	23	31	43	27	14	62

"We would like your opinion about some things that could be against the law in this state." (Q. 17)

	<u>All adults (2405)</u>			<u>Interviewers (210)</u>		
	<u>Yes</u>	<u>No</u>	<u>Not sure</u>	<u>Yes</u>	<u>No</u>	<u>Not sure</u>
What is against the law?						
Possession?	94%	1	5	96%	2	2
Selling it?	97%	*	3	97%	*	3
Being in same room with smoker?	40%	28	32	32%	27	41

*Less than .5%

Reactions to selected arguments for making marihuana legal to have and to use. (Q. 19)

<u>Agree that . . .</u>	<u>All adults (2405)</u>	<u>Interviewers (210)</u>
a. Because of marihuana a lot of young people who are not criminals are getting police records and being put in jail.	83%	84%
b. Laws against marihuana are very hard to enforce because most people use it in private.	76%	82%
c. It would give the police more time to deal with other things.	52%	51%
d. Making marihuana legal would cut down the profits to organized crime.	52%	59%
e. It should be up to each person to decide for himself, like with alcohol and tobacco.	43%	41%
f. Young people would have more respect for the law if marihuana were made legal.	16%	24%
g. So many people are using marihuana that it should be made legal.	15%	22%

Reactions to selected arguments for maintaining marihuana laws as they are, or making these laws stricter than at present. (Q. 20)

	<u>All adults</u>	<u>Interviewers</u>
<u>Agree</u> that . . .	(2405)	(210)
a. There are already too many ways for people to excape from their responsibilities. We don't need another one.	75%	57%
b. The laws against marihuana should have stiffer penalties than they do now because that would discourage people from using it.	60%	41%
c. If marihuana were legal, it would lead to teenagers becoming irresponsible and wild.	57%	37%
d. Strict marihuana laws help our country to keep its moral leadership in the world.	56%	38%
e. If marihuana were made legal, it would make drug addicts out of ordinary people.	47%	28%

IV. Interviewing Experience

A. Field classifications of housing units assigned for adult national and supplementary metropolitan samples.

	<u>National^{1/} sample</u>	<u>Supplementary metropolitan samples</u>
Housing units listed	6718	2915
Housing units assigned	4620	1566
Vacant	457	41
No report	122	53
Occupied	4041	1472
Occupied housing units		
Eligibility unknown ^{2/}	167	109
Not eligible ^{2/}	1059	347
Eligible for interview	2815	1016

^{1/}
National sample includes all sample locations outside the three areas designated for supplementary metropolitan samples, plus an allocation of those in the Chicago and Washington areas equal to the approximate number of housing units that normally would have been included in the Response Analysis national sample from those areas. Thus there is a small overlap between the two columns of numbers, equal to 189 in the number of housing units assigned.

^{2/} These groups include housing units with face sheet instructions which specified "no adult interview" if adult residents were 35 or older only. Eligibility unknown are those for which household composition was not ascertained. Not eligible are those known to include adult residents 35 or older only.

B. Interview completion experience for adult national and supplementary metropolitan samples.

	<u>National^{1/} sample</u>	<u>Supplementary metropolitan samples</u>
Eligible respondents ^{2/}	2965	1103
Interviews returned to Response Analysis	2064	641
Eliminated prior to processing; key ques- tions incomplete	16	4
Included in analysis	2048	637
Respondent not at home	198	83
Household composition not ob- tained (no one at home, re- fused, no report)	371	212
Refused, other incomplete	332	167

^{1/}Includes some overlap with supplementary metropolitan samples (see Note 1 to Table A). The overlap is equal to 133 eligible respondents and 74 interviews included in the analysis.

^{2/}Includes the number of occupied housing units eligible for interview (from Table A) plus estimates of eligibility for housing units with no report on occupancy status or eligibility unknown.

C. Field experience for youth sample

	<u>National youth sample</u>
Households assigned ^{1/}	4151
Youth present (age 12-17)	808
Presence of youth unknown	936
No youth	2407
Estimated number eligible ^{2/}	1033
Questionnaires completed and used in analysis	781

D. Verification of completed materials

	<u>Interviews used in analysis</u>	<u>Number verified</u>
Adult samples		
National ^{3/}	2048	366
Supplementary metropolitan	637	120
Youth sample	781	126

^{1/} Occupied housing units in the national sample, including those in the Chicago and Washington, D. C. areas which normally would have been assigned as part of a national sample. Number includes those estimated to be occupied among those for which no occupancy report was received.

^{2/} Estimated on the basis of known information about other household characteristics.

^{3/} Includes some overlap with supplementary metropolitan samples (see Note 1 to Table A). Overlap is equal to 13 verified interviews.

E. Estimated interview completion rates for adult and youth samples by selected demography

	<u>Eligible respondents</u>	<u>Completed interviews</u>	
Adult samples			
Total national sample	2965	2048	69.1%
<u>Region of United States</u>			
Northeast	682	417	61.1%
North Central	845	588	69.6%
South	938	679	72.4%
West	500	364	72.8%
<u>Type of community</u>			
Largest metropolitan	1048	674	64.3%
Other metropolitan	966	653	67.6%
Nonmetropolitan	951	721	75.8%
<u>Supplementary metropolitan</u>			
Chicago (Cook County)	395	216	54.7%
Omaha (Douglas County)	325	206	63.4%
Washington, D. C. area	383	215	56.1%
Youth samples			
Total national sample	1033	781	75.6%
<u>Region of United States</u>			
Northeast	251	169	67.3%
North Central	308	249	80.8%
South	321	248	77.3%
West	153	115	75.2%
<u>Type of community</u>			
Largest metropolitan	372	271	72.8%
Other metropolitan	314	229	72.3%
Nonmetropolitan	347	288	81.6%

F. Respondent evaluation of the experience

The last part of the adult self-administered questionnaire asked respondents to reflect on the experience of the past hour or so, and let us know about it.

The tables that follow indicate that:

- More than 7 adults in 10 found the experience a satisfying one. A scattering of respondents wished that they had not participated.
- About one respondent in eight reports some degree of holding back on the way they responded to some part of the questions. Most indicate that they did not hold back.
- A little less candor is reported in answers to the self-administered questionnaire than to the interview. The questionnaire includes the behavioral items on use of marihuana and other substances.
- A very few people regard the interviewer as contributing to their lack of candor in response.

Respondent characteristics are shown for those respondents who acknowledge reporting a different amount of experience with marihuana than was recorded by them earlier in the questionnaire.

No tendencies are in these data that would affect the main body of findings.

Evaluation of the Experience

Adults - 2405

"The rest of the questions are about the interview and this questionnaire, the whole thing. First, are you glad you were interviewed or do you wish you had not taken the time for it?"

72%	Glad
3	Wish I had not taken the time
25	Not sure

"During the interview or in this questionnaire, about how often did you hold back and not answer the questions completely or honestly?"

1%	Held back a lot
3	Held back some of the time
8	Held back a little of the time
78	Did not hold back at all
10	I prefer not to answer this question

"At times when you held back or did not answer the questions the way you felt, was it mostly in connection with the interview or mostly in connection with the questionnaire you just filled out?"

4%	Interview
8	This questionnaire
4	Both
84	My answer does not fit the above categories

"Have you had a different amount of experience with marihuana (either more or less) than you have indicated up to now?"

2%	Yes, I have had <u>more</u> than I indicated
2	Yes, I have had <u>less</u> than I indicated
84	No
12	I prefer not to answer this question

"How about the interviewer? Did anything about the interviewer make you less honest than you would have been with a different interviewer, or would you have given the same answers to an interviewer whom you trusted completely? (Your answer will not affect the interviewer's job in any way.)

1%	Make me less honest than I would have been
86	Did not make me less honest than I would have been
13	Not sure what effect interviewer had

"Have you had a different amount of experience with marihuana (either more or less) than you have indicated up to now?"

	<u>Yes More</u>	<u>Yes Less</u>	<u>No</u>	<u>Prefer not to answer</u>
All adults	2%	2	84	12
Sex:				
Men (1034)	3%	2	84	11
Women (1363)	1%	2	85	12
Age:				
18-25 (741)	6%	4	82	8
26-34 (659)	3%	1	89	7
35-49 (457)	*%	0	90	10
50+ (548)	1%	2	80	11
Education:				
Less than high school graduate (666)	2%	2	77	19
High school graduate (836)	1%	2	87	10
At least some college (745)	2%	1	93	4
Region:				
Northeast (417)	2%	1	88	8
North Central (756)	2%	2	84	12
South (868)	2%	2	80	16
West (364)	3%	1	88	8
Marihuana experience:				
Yes (445)	6%	4	84	6
No (1688)	1%	1	89	9
Users (157)	8%	2	81	9

*Less than .5%

G. Interviewer evaluation of experience

Following the personal interview, while adult respondents were working on a self-administered questionnaire, interviewers were asked to attend to a number of tasks. (See page 15 of the adult interview form -- white paper -- for the instructions to interviewers at this point in the work).

One interviewer task included evaluating the interview experience. The three evaluation questions asked for an estimate of respondent understanding of the interview (Q. 59); an estimate of respondent cooperation (Q. 60); and the interviewer's appraisal of the validity of the interview.

First, on respondent understanding of the interview.

75% No difficulty -- no language or reading problem
13 Just a little difficulty -- almost no language or reading problem
6 A fair amount of difficulty
5 A lot of difficulty
1 (Not reported)

Of the 11% reporting a fair amount or a lot of difficulty, there was disproportionate contribution from three sources:

17% People age 50 or older
24% People who had less than a high school education
18% Residents of the South

Next, interviewers report a high degree of respondent cooperation.

86% Very cooperative
12 Fairly cooperative
2 Not cooperative
* Openly hostile

*Less than .5%

Last, interviewer confidence in the validity of the opinions and information supplied.

77% Completely confident
18 Reasonably confident
3 Have some doubts
1 Have considerable doubts
1 (Not reported)

The 4% above who report some or considerable doubts are disproportionately contributed to by interviews with non-white respondents. In 13% of those interviews, interviewers report some or considerable doubts.

V. Analysis

A. Weighting procedures

Weights were used in the computer processing of survey results to merge the Chicago and Washington, D.C. metropolitan samples with the remainder of the adult national sample, to compensate for differences in probabilities of selection assigned to various population subgroups, and to adjust for observed differences in interview completion experience.

Weights assigned to the Chicago and Washington, D.C. areas were designed to yield the following percentage distribution in the total adult national sample:

Chicago (Cook County)	2.7
Washington metropolitan area	1.4
Remainder of U. S.	95.9
	<u>100.0</u>

Population subgroups were weighted inversely proportionate to the probabilities of selection assigned for field interviewing

<u>Adult household composition</u>	<u>Selection rate</u>	<u>Relative weight</u>
18-34 only	1	1.0
18-34 and 35 and older -- Selected subgroup:		
Persons 18-34	2/3	1.5
Persons 35 or older	1/3	3.0
35 and older only	1/2	2.0

Weights were also assigned to compensate for selection rates which depended on the number of persons eligible for interview in the selected subgroup.

<u>Number of persons in household in selected subgroup</u>	<u>Selection rate</u>	<u>Relative weight</u>
1	1	1
2	1/2	2
3	1/3	3
4	1/4	4

In addition, weights were assigned to adjust for observed differences in interview completion rates for these population characteristics:

Geographic region
Community type
Sex
Age
Education

For the youth sample, weights were used to compensate for different probabilities of selection within household (inversely proportionate to number of persons 12-17 in the household) and to adjust for the overall sex and age distribution, and for differences in completion rates for geographic regions.

**B. Sample characteristics compared with Census estimates
(adult sample)**

	<u>Sample</u>	<u>Census*</u>
SEX		
Men	49%	48%
Women	51	52
AGE		
18-25	21%	21%
26-34	17	17
35-39	8	8
40-49	17	18
50-59	15	15
60 or older	22	21
EDUCATION		
8th grade or less	20%	24%
Some high school	15	17
High school graduate	34	36
Some college	12	13
College graduate	13	10
Other	6	
RACE		
White	87%	87%
Other	11	13
Unclassifiable	2	
MARITAL STATUS		
Married	69%	69%
Single	18	17
Widowed	9	9
Divorced/separated	4	6
REGION		
Northeast	25%	24%
North Central	28	28
South	30	31
West	17	17

*Source: Population Characteristics: current population reports.
U. S. Bureau of the Census, 1971.

VI. Exhibits

- A. Study schedule
- B. Instruction manual for interviewer training
- C. Written communications to interviewers
 - 1. Advance letter for listing assignment (to field service supervisors, and to independent interviewers)
 - 2. Letter accompanying listing assignments
 - 3. Letter accompanying counting assignments
 - 4. Advance letter on interviewing assignment
 - 5. Letter accompanying reassignments
 - 6. Letter to field supervisors accompanying performance evaluation of interviewers
- D. Written communications to respondent households
 - 1. Letter to introduce study
 - 2. Letter urging participation, sent to households which had not completed the work
- E. Internal procedures
 - 1. Editing instructions
 - 2. Processing of face sheets
 - 3. Error code and processing of questionnaires
 - 4. Validations
 - Procedure
 - Forms
 - Questionnaire
- F. Questionnaires used for data collection

A. Study Schedule

Development

July

- 6-16** Assemble and read background materials, prepare issue lists, hypotheses and questions
- on 12** First meeting with consultants
- 14-15** Group interviews
- by 21** Draft of questionnaire for discussion and changes
- on 23** Meeting on draft questionnaire with consultants and Commission staff
- 28-30** Typing and reproducing questionnaires for first pretest

August

- on 5** Assemble and brief pretest interviewers
- 6-8** Pretest #1
- on 9** Debriefing
- 9-10** Discuss pretest, prepare changes
- on 15** Tell printer about assignment and deadline dates
- 16-20** Pretest #2
- on 20** Debriefing
- 23-27** Pretest #3 if needed, and prepare final draft for printer
- by 31** Final draft of all materials given to printer

September

- by 8** All materials printed and ready for distribution

Sampling

July

- by 19 Select sample locations for national study
- 12-23 Develop state/metro area subsamples (if included in study)
- 19-23 Select and alert supervisors/interviewers for prelisting assignments
- July 26-
August 6 Prepare maps/listing sheets/prelisting instructions

August

- by 9 Mail prelisting assignments
- by 23 Deadline for receipt of prelisting assignments
- Aug. 23-
Sept. 10 Process prelistings, select housing units, address envelopes for mailing to respondents
- Aug. 30-
Sept. 3 Draft and print advance letter to respondents

September

- 10-22 Mail advance letter to respondents (timed to precede regional training meetings by 2 days)

Interviewing

August

- 2-13 Select locations and arrange facilities for regional training meetings
- by 13 Select and alert supervisors/interviewers for interviewer training and interviewer assignments
- 23-27 Prepare interviewer manual and training materials
- by 31 Interviewer manual and other training materials ready for printer

September

- by 1 Confirm details of arrangements for training meetings and interviewing assignments to supervisors/interviewers
- 1-8 Plan interviewer evaluation and validation procedures
- 9-10 Princeton training conference
- 13-24 Regional training meetings
- on 14 Interviewing begins
- Sept. 20-
Oct. 22 Validation, check-in, interviewer control

October

- 4-15 Intensive follow-up to reassign and/or retrain interviewers
- by 22 Interviewing completed

Analysis

September

by 24 Analysis plan drafted and submitted for review, including procedures for coding free response questions

October

on 4 Meeting to evaluate, approve of analysis plan

by 8 Samples of verbatim comments for free response questions

by 10 Submit plan to data processing supplier

11-18 Draft codes prepared for review

November

by 1 Coding of free response questions

by 5 Key punching of cards and card cleaning
Weighting of sample in preparation for data file

5-9 Data processing

by 10 First set of printed tables ready

Nov. 10-
Dec. 10 Preparation of draft report

15-30 Additional data processing

December

on 12 Evaluation and review of draft report

13-23 Final report prepared

January

10 Final report reproduced and delivered

Methodological Appendix and supplementary data prepared and delivered

B. INTERVIEW INSTRUCTIONS

SOCIAL ISSUES STUDY

Response Analysis Corporation
Princeton, New Jersey

September 1971

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Both adult and youth are eligible, but I can only get adult, not the youth	
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Adult interview is completed, but I have to come back for the self-administered part. Should I mail just the interview?	
Respondent asks me for help in filling out the self-administered questionnaire. Can I help him?	
Respondent cannot read. Can I read the self-administered questionnaire to him?	
An adult wants to see the youth self-administered questionnaire before the son or daughter takes it. Can I show it to him?	

IN BRIEF . . .

This is a study of social issues with emphasis on marihuana.

There are three different interviewing situations. You will probably get some of each: (1) households where there is one respondent, an adult 18 or older; (2) households where there are two respondents, an adult plus a young person age 12-17; (3) households where there is one respondent, a young person age 12-17.

Assignments vary in number of households to interview in, but the average is around 20.

Probability sample:

- In households where the assignment calls for one respondent, you may make a total of four calls (an original and three follow-ups) in order to get the face sheet information plus the interview with that respondent.
- In households where the assignment calls for two respondents (an adult and a young person) you make up to six calls (an original and five callbacks) to get the face sheet information plus complete your work with the two respondents.

Interview length:

With adults, 40-45 minutes, considerable variation above and below.

With young people, about 30 minutes, more or less depending on reading ability.

Deadline:

All work should be mailed to us by _____.

INTRODUCTION

1. SUBJECT

This is a nationwide study of knowledge, attitudes and behavior related to marihuana. This is the first nationwide study of both adults and youth which goes into the subject in depth. We have benefitted from the fact that there already have been several statewide surveys on the subject done and reported, but none on a national scale.

As you can see, this is an unusually important study. Please take pains to be complete and accurate in your work.

2. SPONSOR

The National Commission on Marihuana and Drug Abuse was set up by Congress last year. Chairman is former governor Shafer of Pennsylvania. The Commission includes two Senators (Javits of New York and Hughes of Iowa) and two Representatives (Rogers of Florida and Carter of Kentucky).

What to tell respondent about study.

Tell him that the subject is Social Issues. Do not mention marihuana. If he asks about sponsorship during the interview, or before he has filled out all of the self-administered questionnaire, please say only that the survey is being done under a research grant.

At the end, when you have completed your work in a household, you may say, if asked, who the actual sponsor is.

3. BACKGROUND

Marihuana (also spelled "marijuana") is used in increasing numbers by young people and older ones. Laws against it vary widely from state to state and range from a fine to a severe punishment. This study tries to get at the three areas: legal and enforcement variations; physical and psychological pros and cons; and the possible benefits and detriments to society from usage of marihuana.

4. WHO WILL BE INTERVIEWED

The study includes interviews with adults, age 18 and older. The interview is in two parts: mostly a face-to-face interview, but also a short self-administered questionnaire.

In addition, there are self-administered questionnaires for young people age 12-17. Sometimes both an adult and a young person in the same household will go through the procedure with you. Sometimes just an adult, and sometimes just a young person. Your materials and the training session will show you how to know exactly whom to interview.

5. ADMINISTRATION OF INSTRUMENTS

We have borrowed from the good experience of other drug studies for a new procedure. Its purpose is to absolutely guarantee anonymity to respondents and it has worked out very well in our pretests. This manual covers it in detail. Briefly, it means mailing each respondent's materials to us after they are completed, instead of collecting interviews and mailing them in bunches. It reassures respondents, makes your job easier, and helps you to keep the interviews confidential.

Incidentally, when respondents indicate on the self-administered questionnaire that they are marihuana users, that fact does not incriminate them. You can't be subject to legal action for just saying that you have had marihuana in your possession.

6. WHY WE NEED A SPECIAL TRAINING SESSION WITH INTERVIEWERS

This training would be almost unnecessary for just the interview and self-administered questionnaires. They are simple and work well. The main emphasis is on the new administration procedure and some of the sampling details.

7. KNOWLEDGE OF RESULTS

A percentaged report should be available from the Government Printing Office, Washington, D. C., sometime in 1972. Anyone who wishes to can write for a copy.

Your contacts at Response Analysis:

For sampling problems - (609) 921-3333

For administrative information, materials, etc. - (609) 921-3340.

YOUR MATERIALS

1. Interview forms for adults (white)
2. Self-administered questionnaires for adults (orange)
3. Self-administered questionnaires for youths (green)
4. Two sets of handout cards for adult interviews

(Card B comes in three forms, B-1, B-2, B-3. They are the same except for order of items. Use whichever one you get).

5. Sampling materials
 - a. map of sample block(s)
 - b. green address lists (for prelisted locations) or
 - c. yellow housing unit listing sheets for locations that have not been prelisted
6. Household face sheets (buff)
7. Youth face sheets (blue)
8. Large size business return envelopes, one for each respondent
9. Small size envelopes, for returning face sheets
10. Printed postcards, one for each respondent
11. Copies of the letter sent to respondents
12. Interviewer I.D. card
13. Weekly status reports (for interviewers who work through supervisors)



CONSUMER STUDIES • SOCIAL RESEARCH • MONITOR SURVEYS

Response Analysis Corporation

September 1971

Dear Resident:

Within the next week or so, an interviewer will visit to ask someone in your household to take part in an important national survey.

The interview is mostly a series of questions about people's opinions on national and local issues.

Your household was selected as part of a nationwide cross-section of the public. All households are picked at random by statistical means.

Important: No one will try to sell you anything. This is strictly research, and research is our only business.

Our interviewers are personally and carefully trained. They are courteous and polite, and know how to help make an interview enjoyable and interesting.

No one will ever connect your name with your opinions. We punch your answers on an IBM card, and then throw away the interviews.

We look forward to your cooperation when our interviewer calls on you. We think you will enjoy the interview. It is an important survey. The interviewer will tell you whatever you want to know about it.

If you have any questions about the survey or our company, call me at our Princeton headquarters. The number is (609) 921-3333.

Sincerely,

Diane Schroyer
Survey Director

agp

ADMINISTRATION

1. PROCEDURE

- A. Prelisting of area. This step has been completed in most locations. If it needs to be done in your location, we will go over it with you during the training meeting. Instructions for prelisting are included in this manual.
- B. First contact at household and completion of face sheet. The best time to interview is right after you have completed the face sheet and know whom to interview.

Before your first contact, households that have been prelisted will have a letter from us telling about the study. You can show them a copy of the letter to refresh their memories if you want to.

- C. Three different procedures for administration:

- Households where only an adult is interviewed
- Households with an adult interview plus a youth questionnaire
- Households with only a youth questionnaire

1. Households where only an adult is interviewed

- a. Conduct interview.
- b. Towards the end of the interview, there is an instruction to hand the respondent the self-administered questionnaire.

At that time, give respondent questionnaire and one of the big return envelopes (and a ball point pen if needed) and explain the system. The system is as follows:

- (1) respondent's name and address does not appear anywhere on the interview or the self-administered questionnaire.
 - (2) the envelope is for the respondent to put the questionnaire into when he is finished. Interviewer never sees questionnaire.
- c. When respondent says that the questionnaire is completed, ask him if all questions that pertain to him (or her) have been answered. If not, please wait while respondent checks over the questionnaire.
- d. Tell respondent to put questionnaire in large envelope. You should not see it after it is filled out.

Give respondent interview to put in envelope.

MAKE SURE LOCATION NUMBER AND HOUSING UNIT NUMBER ARE ENTERED IN THE INTERVIEW WHERE SHOWN ON INSTRUCTION PAGE TOWARDS END OF INTERVIEW.

- e. Explain postcard. It is to verify the fact that the interview has been done and it goes to a different address than the interview. The postcard and the interview are always kept separate.

Fill out postcard with respondent's help if needed.

- f. Ask respondent to go with you to the nearest mailbox to mail the envelope. Be sincere. Make it a genuine offer. (Most respondents will refuse and tell you to do it yourself. If so, just take the envelope from the respondent.)
- g. Whether respondent goes with you, or not, make sure that both the envelope and your completed postcard are mailed at the same time.
- h. If respondent does not go with you, simply mail the envelope and the postcard as soon as you can. If you have another interview in the same area, and there is no mailbox handy, you may keep the envelope and the postcard until after you have finished the second interview. However, completed work should be mailed before you reach home.

2. Households where an adult and a youth are interviewed.

- a. Finish the adult procedure. That is, interview and self-administered questionnaire in return envelope.
- b. Tell respondent that a shorter version of the procedure is for one other person in the household (identify who it is from your face sheet information).

Explain that there is no interview, just the self-administered questionnaire. Ask to see that person and arrange for doing the questionnaire.

Our experience shows that you will get almost 100% cooperation from the adult who typically leaves it up to the young person to arrange with you to do it.

- c. If at all possible, see if you can get this youth questionnaire (green) completed during the same visit as the adult interview and questionnaire. If not, arrange to come back with it.
- d. Procedure on youth questionnaire:
 - (1) Give questionnaire (green), a return envelope, and ball point pen (if needed) to respondent and explain system.
 - (2) No one will ever be able to connect his or her name with the questionnaire or to know what they put down (that's why it is self-administered, so no one hears the answers).

- (3) To verify that the questionnaire was filled out, we have provided for a code number (which is the Location and Housing Unit Number) to be put on the front page of the questionnaire and also on a postcard. The postcard is sent to a different address from the questionnaire.

AT THIS POINT RECORD THE LOCATION NUMBER AND THE HOUSING UNIT NUMBER ON THE QUESTIONNAIRE IN THE LOWER RIGHT HAND CORNER OF THE COVER, BEFORE RESPONDENT BEGINS. Put the same number on the postcard.

- (4) Stay in the room with the respondent while he or she fills out the questionnaire. One of your main jobs is to keep other household members from interfering. If possible, just tell anyone who comes in to watch that the respondent needs complete concentration.
- (5) When respondent says he is finished, ask him to make sure that he has answered all questions that pertain to him.
- (6) Tell respondent to put questionnaire into return envelope. MAKE SURE THAT THE LOCATION AND HOUSING UNIT NUMBER IS ON THE COVER OF THE QUESTIONNAIRE.
- (7) Fill out postcard with help of respondent, if needed.
- (8) Ask respondent to go with you to nearest mailbox to mail envelope. Make it a genuine offer. (If respondent prefers, you can mail it for him.)

3. Households where just a young person is interviewed

Identify respondent, and use the same procedure as described above for the youth questionnaire.

Just remember to use the green questionnaire (youth).

2. SOME QUESTIONS AND ANSWERS ABOUT ADMINISTRATION

- A. What do I do with the face sheets? When do these get mailed?

You will have two kinds of face sheets, a household face sheet (buff) used for selecting adult respondents, and a youth face sheet (blue) for each household in which there is a person 12-17.

Twice a week, please mail us all face sheets, the ones that go with completed adults and completed youth questionnaires, and the face sheets for households where you either cannot complete the assignment or where there was nobody eligible to interview.

Take one of the small size return envelopes. Write "face sheet" on the front, put the accumulated face sheets in, and mail to us.

- B. What if the adult completes part or all of the interview, but does not want to do the self-administered questionnaire? What should I do?

Mark the location number and housing unit number in the interview on the instruction page towards the end.

Put the interview into a return envelope, and put a blank orange questionnaire into the envelope.

Fill out the postcard. Write the word "incomplete" on the postcard.

Mail the envelope and the postcard to us. Record on Face Sheet.

PLEASE MAKE EVERY EFFORT TO COMPLETE BOTH THE INTERVIEW AND SELF-ADMINISTERED QUESTIONNAIRE WITH ADULTS, BECAUSE WE CANNOT USE THE INTERVIEW BY ITSELF.

- C. What if I get the adult interview and the adult questionnaire filled out, but then, for some reason, I cannot get the youth questionnaire filled out in that household?

Send us the adult interview and questionnaire as per instructions. Make every effort to get the youth questionnaire filled out.

On the youth face sheet for that household (blue) record what happened, and mail it in with the other regular mailings of face sheets.

- D. What if I come to a house where both an adult and a youth are eligible for the survey? For some reason I cannot do the survey with the adult. What should I do about the youth questionnaire in that household?

By all means, try to get the youth questionnaire completed by the eligible respondent. It counts, even if there is no adult questionnaire to go with it.

- E. During the self-administered questionnaire an adult (or a youth) asks me a question about something they do not understand. Can I help them?

Yes, but only in a limited way. Tell them you are not allowed to look at their questionnaire. But you can open a blank copy that you have with you and find the question that is troublesome and give whatever assistance you can. It is better not to help at all unless it is clear that you have to.

- F. In households where both an adult and a youth are eligible, do I have to do the adult interview and self-administered questionnaire before the youth fills out the self-administered questionnaire?

We prefer that you finish with the adult before doing the youth part. But, if the youth is available and adult is not, go right ahead and get the youth self-administered questionnaire completed and mailed. Arrange to come back for the adult.

- G. What if an adult or youth cannot read? Should I read the self-administered questionnaire to them?

If the questionnaire is completely beyond them, just write "reading problem" on the postcard. If it is an adult, send back the completed interview plus a blank questionnaire. If youth, write "reading problem" on face sheet. Send us face sheet.

If they have trouble reading but can handle at least half of it themselves, then you may help by actually reading the questions to them and helping them fill it out. If you do this, write "interviewer help" on the cover of the questionnaire before it is put into the big envelope.

- H. If an adult or a youth wants to fill out the questionnaire on their own time, should I leave the questionnaire with them and come back for it?

No. Just make an appointment to come back when you can be there. Do not leave the questionnaire. You should be there when the questionnaire is filled out.

- I. Yes, but what if the adult interview is completed and I have to come back later to do the adult self-administered questionnaire? Should I mail anything back at this point?

No. Please hold on to the interview which is completed and bring it back with you when you come to have the adult fill out the questionnaire, then mail them both back in the same envelope. That would also be the time to mail the postcard.

If the adult never gets around to doing the questionnaire, then mail back just the interview plus a blank questionnaire and the postcard all at the same time.

However, the self-administered questionnaire is purposely short. Try very hard to get it filled out at the time of the interview.

- J. Let's say an adult in the household wants to see the youth questionnaire before the young person fills it out. What should I do?

Let them see a blank copy but remind them that after it is filled out nobody, including the interviewer, will know what was written in it.

- K. When can I tell who the sponsor is?

At the very end. In adult plus youth households that means after both the adult and the youth are finished. At that time you can also suggest that copies of the report will be available sometime in 1972 from the Government Printing Office, Washington, D. C.

3. A REVIEW OF THE IDENTIFICATION PROCESS

- A. The postcard which you fill out in connection with each adult and each youth respondent, looks like this:

This card is for interview verification purposes only.

Location No. _____ Housing Unit No. _____

Respondent name: _____

Street address: _____

City or town: _____ State: _____

Telephone: (Area code: ____) _____

Date of interview: _____

Interviewer I.D.: _____

1 Adult
2 Youth

- B. The adult interview has the Location number and Housing unit number entered in the interview, on a page just before the end, the Interviewer Instructions page.
- C. The adult self-administered questionnaire--orange--has no number on it. It must always be sent together with the adult interview in the same envelope. That is how we will know which self-administered questionnaire goes with which interview.
- Please never send just an adult self-administered questionnaire by itself.
- D. For the youth, there is only one instrument, the green questionnaire. The Location number and Housing unit number are entered on the line at the bottom right hand corner where it says "Code". This number should go on before the respondent starts on the self-administered questionnaire.

THE INSTRUMENTS

1. Introduction

- a. The instruments are very straightforward. No tricky techniques, no gimmicks, very few exclusion questions.

Please make a special effort to do as complete and accurate a job as you know how.

- b. The subject matter grabs people, it is something they care about, and you will find that your respondents get very involved in the interview.

- c. Timing.

Adults - interview plus self-administered questionnaire - average 40-45 minutes, some more, some less. Try to move the interview right along, but always give respondents plenty of time to think and decide.

Youth - self-administered questionnaire - about 30 minutes. A lot depends on how well respondent reads.

2. Notes on the adult interview

Record answers to multiple choice questions by drawing a circle around the number next to the response that you are given.

Record answers to open-ended or free response questions by writing the answer verbatim, word for word, as given, and probe for more information to make sure you have a complete answer.

- Q 1, Q 3. These are the two main open-ended questions. Probe to get specific information.

Example: respondent says "youth problem" or "race" or "drugs" or "crime."

These answers are not enough. We would not know how to use them. For example, if respondent says "crime" probe for more information. As "Can you tell me more about what you have in mind?" Is respondent talking about muggings in the streets, or prostitution, or organized rackets, or what?

If "drugs," find out "What kind of drugs?" "What is the problem that you mean?" etc.

Try hard. We need these.

- Q 9 This question uses a card with the names of a lot of drugs and other substances on it.
- If a respondent has heard of even one item in a category, the whole category counts as one that he or she has heard of. Example:
- Amphetamines (such as dexadrine, "pep pills," ben-zadrine, "ups," "greenies")
- If respondent has heard of "pep pills" and that is the only one in this category that he or she has heard of, the whole category counts and should be recorded in the "have heard of" column.
- Q 12, 13 Be sure to say "Do you mostly agree or mostly disagree" after each of the first four or five statements, and then as needed for the rest of the list.
- Q 24 The respondent has the choices spelled out on the card, each choice numbered. You only have the numbers identifying the columns. Be sure to get the answers by saying "What number is that?" when respondent gives words but no number.
- Q 29-33 This is a key section where we try out different proposals on respondents.
- Give plenty of time at the beginning for them to read all of the proposals. Then, as you review them, one at a time, read the questionnaire material slowly and correctly.
- The respondent has alternatives to choose from, each with a letter. He or she may give you the letter instead of reading the words that go with it. Your interview form has the letters printed on it along with the precode number for you to circle.
- Special Instructions page.
- This is put here to help you do your job with no problem. Use the page each time you do an interview. And please, whatever else, remember to put in the location and housing unit number on the questionnaire where shown and on the postcard that you will mail with it.
- Last page To be filled out by you while the respondent is doing the self-administered questionnaire.

3. Notes on the adult self-administered questionnaire (orange)

Please remember to give respondent a large envelope at the same time as you hand him the questionnaire. Explain the reason: when he is done, he is to put the questionnaire in the envelope himself. No one else will see it.

Give the respondent very little help. He has to do this questionnaire himself.

After he reads the cover copy, ask him if he understands how to record the answers. If he does not, go over the sample question with him, the one on the cover, and show how it works (circling the number that comes closest to his response).

Help with the following matters only if help is asked for:

Q. 6,7 Some categories have several examples given as part of the category. If respondent took only one thing in a category, the number for that category should be circled.

Respondent should do all of Q. 6 first and record his answers in the first column of numbers. And Q. 7 second.

He should circle as many numbers as apply.

Please do not help by explaining the categories that he has never heard of. Respondent should just deal with what he is familiar with.

Skip patterns

Respondents who have never tried marihuana would answer Q. 1 - 16, then skip to 25 and complete all the remaining questions.

Respondents who have tried or use marihuana would answer Q. 1 - 13, then skip to 17 and complete all the remaining questions.

At the end, ask respondent if they have answered all the questions that pertain to them. Say that you do not want to know which questions they have skipped or answered.

Then ask respondent to put the questionnaire into the return envelope. Hand him the interview form which also goes into the same envelope. Then he would peel off the tape from the flap and seal the envelope. No licking needed.

4. Notes on the youth self-administered questionnaire (green)

Give respondent large envelope at the same time as you hand him the questionnaire.

Explain that it is self-administered instead of an interview so that neither you nor anyone else in the house can know his answers.

Explain the system: the "code" number in the lower right hand corner is the only means of identifying the questionnaire and we need that for verification. Show the postcard and how it works (i.e. goes to a different place).

RECORD THE LOCATION NUMBER AND THE HOUSING UNIT NUMBER ON THE QUESTIONNAIRE IN THE LOWER RIGHT HAND CORNER OF THE COVER, BEFORE RESPONDENT BEGINS.

Give respondent very little help. But make sure that he understands how to record his answers. After he reads the cover page and before he begins, ask if he understands how to record his answers. Show him if there is any question about it. And please tell him to make sure to answer all questions that pertain to him.

- Q. 12. There are several examples for some of the categories. If he
Q. 13. or she has heard of just one of these, the category counts and the number for it should be circled. (Same goes for Q. 13 on "can be harmful")

Skip pattern

If respondent has not tried marihuana, he or she should answer Q. 1 - 38, then skip to 47 and answer the remaining questions.

If respondent has tried or uses marihuana he or she should answer Q. 1 - 35, then skip to 39 and answer the remaining questions.

When respondent is finished, ask if they have answered all the questions that pertain to them. Say you do not want to know which questions they have skipped or answered.

Then, IF YOU ARE SURE THAT THE LOCATION NUMBER AND HOUSING UNIT NUMBER ARE ON THE COVER OF THE QUESTIONNAIRE, ask respondent to put the questionnaire in the envelope. Then he would peel off the tape from the flap and seal the envelope. No licking needed.

Before you leave, make sure that the postcard is filled out.

SAMPLING PROCEDURES

WHERE TO INTERVIEW: PRELISTED LOCATIONS	1073
Instructions for prelisted locations apply if <u>green address lists</u> have been provided for your location.	
LOCATIONS <u>NOT</u> PRELISTED	1075
Instructions for locations not prelisted apply if <u>yellow Housing Unit Listing Sheets</u> have been provided for your location	
DEFINITION OF A HOUSING UNIT	1081
WHOM TO INTERVIEW	1083
FIELD PROCEDURES	1088

WHERE TO INTERVIEW: PRELISTED LOCATIONS

Instructions on these pages apply if green address lists have been provided with the map of the location.

"Where to Interview" instructions for locations that have not been prelisted are on pages 22-27 of this section.

Addresses of housing units selected for the sample have been assigned in "clusters." There are usually a number of housing units in a cluster, but a cluster may be only one housing unit.

Each cluster is listed on a separate green form. The "block" number is shown on the form so that you can refer back to the map or sketch to help locate the assigned cluster. More than one cluster may have been selected from the same block.

- In each cluster, your assignment starts with the first housing unit listed on the green form.
- The assignment goes up to, but does not include the address listed in the box at the bottom of the form.

You include housing units within the assigned cluster:

- if the address was listed incorrectly in the original listing
- if the address was copied from the original list incorrectly by us
- if the housing unit was overlooked in the original listing

ILLUSTRATION

This number appears on Interview Face Sheet

BLOCK # (for map or sketch reference only)	HOUSING UNIT #	SELECTED ADDRESSES	INTERVIEWER NOTES
6	15	3246 STATE ROAD	
	16	3240 STATE ROAD	
	17	3238 STATE ROAD	
	18	3230 STATE ROAD	

Red line drawn across green form

NEXT ADDRESS LISTED: 3220 STATE ROAD

DO NOT INCLUDE THIS ADDRESS IN YOUR SAMPLE. IT IS SHOWN HERE TO INDICATE WHERE THIS CLUSTER OF ADDRESSES STOPS IN THIS "BLOCK."

In the illustration on the opposite page, the assigned cluster starts at 3246 State Road, and goes up to but does not include 3220 State Road. Here are some examples of possible problems:

Example #1

There is no such address as 3238 State Road. However, there is a housing unit at 3236 State Road. (We may have made an error in copying the address from the original listing, or it may have been listed incorrectly.)

Change the address on the green form, and add your own note to show why. Use the Household Face Sheet for Housing Unit #17 for 3236 State Road.

Example #2

When you go to 3240 State Road you find that it is actually a two-family house -- that is, two housing units according to our definition -- one downstairs and one upstairs.

Both housing units are in the sample.

For the housing unit at 3240 State Road (downstairs), use Household Face Sheet for Housing Unit #16.

For the housing unit at 3240 State Road (upstairs), use one of the extra supply of Household Face Sheets included with your materials.

Write the additional address on the line of the green form below where the red line has been drawn across. Also write in the Housing Unit # that you are using for that address. The Housing Unit # comes from the first unused Household Face Sheet in the extra supply included with your materials.

Example #3

As you are working on your assignment in this cluster you notice that there is a house in between 3230 State Road and 3220 State Road. It is set back and mostly hidden from the road and therefore may have been overlooked in the original listing. You find the number 3226 on this housing unit.

Write this additional address on the first unused line of the green address form. Include it as part of the assignment for this cluster. The first unused Household Face Sheet in your "extra supply" would be used for this housing unit. The Housing Unit # comes from that form.

Example #4

The address listed at 3246 State Road turns out to be a real estate office -- it is not a housing unit. Write a note on back of the Household Face Sheet for Housing Unit #15 to tell us about this. Do not substitute another housing unit. [Note: This same point applies wherever you find that a listed address is not a housing unit -- for whatever reason. Do not substitute another housing unit that is outside your cluster of assigned addresses.]

WHERE TO INTERVIEW: LOCATIONS NOT PRELISTED

These instructions apply if yellow Housing Unit Listing Sheets have been provided with the map of the location.

"Where to Interview" instructions for locations that have been prelisted are on pages 20-21 of this section.

This section contains instructions for listing housing units in specified blocks or parts of blocks. Your materials should include:

A white assignment sheet -- this lists the block numbers for which you are to do housing unit listings.

A map or sketch attached to the white assignment sheet shows how each block is defined. Each block is outlined in red on the map. The block number is in blue.

A yellow Housing Unit Listing form for each complete block or part of a block that you are assigned to list.

A pink Housing Unit Listing form.

Two Types of Listings

An instruction on the yellow Housing Unit Listing form tells you which of these two types of listings applies:

- LIST COMPLETE BLOCK -- List all housing units within the block outlined on your map.

Start at the point marked by the blue dot.

Continue to list housing units you find in that block until you return to that point.

- LIST PART OF BLOCK -- When this instruction applies you will normally have a specific address or description of housing unit at which you are to start your listing.

The stopping point is also indicated when you have this type of instruction. List housing units up to, but do not include or go beyond, the address (or description) used as the stopping point in your instruction. The last housing unit you will list will be the housing unit before the stopping point address.

Occasionally, two different parts of the same block have been assigned for listing. Do not be surprised if you find this type of instruction as part of your assignment.

If you have any difficulty determining which housing units you are to list, please call station-to-station collect (609) 921-3333. We will try to give you more detailed information on which housing units are and are not in the sample for this study.

Two Types of Housing Unit Listing Forms

A yellow Housing Unit Listing form must be filled out for each block or part of block assigned. Notice that there is a red line drawn across each yellow sheet. Always begin your listing on the first line of the yellow sheet. List all housing units in the assigned block or part of block, until you reach the red line. If you have listed up to the red line, and there are still more housing units in the block or part of block, continue the listing on the pink Housing Unit Listing form.

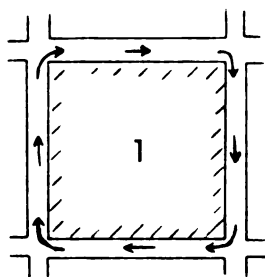
Note that on the pink form there is a column for "Block #". Please record the Block Number on each line if you need to use the pink form. If you have used the pink form for your first block, and then find that you also need to use the pink form to complete the listing of your second block, just continue on the next line of the pink form. Do not skip lines between blocks on the pink form, but be sure to record the correct block number on each line you use.

Procedure for Listing Housing Units

It is important in listing that you do a complete job of searching out all housing units. The following rules pertaining to listing must be carefully observed:

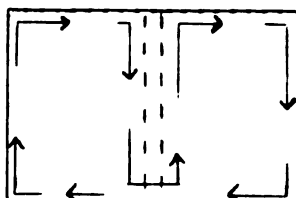
1. Find the correct starting point -- indicated by the blue dot on the map if it is a COMPLETE BLOCK listing, or ordinarily by a specific address if it is a PART OF A BLOCK listing.
2. Always proceed in a clockwise direction around the block. This rule applies whether you are doing a "complete block" listing or a "part of block" listing. Housing units on your right as you proceed around the block are within the assigned block and should be listed.

In the sketch below, the arrows show what we mean by a clockwise direction. The shaded area (the housing units on your right) would be listed in Block 1.



In some irregularly-shaped blocks, it may be difficult to figure out what a clockwise direction would be. In these cases, we have put blue arrows on the map to show the proper direction.

3. If there is a street inside your block, whether or not it appears on your map, include it in your route. In the following example, the street inside the block is indicated by a dotted line. The arrows indicate your route.



Housing units on both sides of the street (inside the block) would be included in your listing.

Procedure for Listing Housing Units (cont'd.)

4. List each housing unit, as you come to it on a separate line. DO NOT SKIP LINES. Use the lines marked with housing unit numbers and the lines marked with X's. Use the column labeled "Notes," or the margins, or separate blank paper for special notes.
5. In a multi-family house or apartment building, start on the lowest floor and work toward the top. List numbered apartments in numerical order, lettered apartments in alphabetical order.
6. List vacant housing units. Do not list stores, businesses or other structures that are not housing units. If you are sure that a housing unit is vacant, note that on the listing sheet.
7. If a street in the Block has no housing units, note that on the listing sheet in the "notes" column, but do not skip a line.
8. Be careful not to list outside the boundaries of the block. Sometimes, boundaries may be "imaginary" lines, like city lines, town limits, county lines, etc. In these cases, the "imaginary" boundary will be shown on your map as a red broken line (- - - -). Be especially careful about these kinds of boundaries. Stay within the red-outlined area, even if one of the boundaries is not an actual road or other recognizable landmark.

In listing housing units, please follow a careful procedure of looking for housing units in out-of-the-way places (basements, over stores, etc.)

Post Office Address: First of all, fill in the "Post Office Address" at the top of the listing sheet. The name of the area as it appears on your map is not always the same as the post office address for the housing units in that area. If you are not sure what the post office address is, ask someone who lives there, or ask at a post office in the area.

How to Record Addresses

Generally in cities and towns there will be street names and house numbers to identify housing units. Record this address in full detail. Make sure that another person using your listing later will be able to find each individual housing unit you have listed.

Use complete names for streets. Be sure to include "Street," "Avenue," "Lane," etc.

How to Record Addresses (cont'd.)

If the housing unit has no house number, describe it. Look for something permanent about it that will distinguish it from the rest of the housing units. If there is a name on the mailbox or house, be sure to record it.

If there is more than one housing unit at the same address, you must record the address plus further information, such as apartment number or location, as:

215 Elm Street, Apartment 1
215 Elm Street, 1st floor
215 Elm Street, 2nd floor right

You must have a different address or description on each line.

In some rural areas, there may not be street names or house numbers. In these cases, please record a complete and accurate description of each housing unit. If there is no address and no name on the mailbox, describe the housing unit well enough for someone else to find it, as:

White house with green shutters
White house, long driveway, picket fence, etc.

Below is an example of how part of a correctly filled-out Housing Unit Listing Sheet might look.

Housing Unit #	Address or Description	Notes
01	319 FRONT STREET	
X	317 FRONT STREET, 1 ST FLOOR	
02	317 FRONT STREET, 2 ND FLOOR	
X	307 FRONT STREET	
X	TRAILER BEHIND 307 FRONT STREET	
03	301 FRONT STREET	
04	21 3 RD AVENUE, 1 ST FLOOR	
X	21 3 RD AVENUE, 2 ND FLOOR	
05	11 3 RD AVENUE	VACANT
X	NO. # 3 RD Ave. BROWN HOUSE NEXT TO GAS STATION.	

Assigned Housing Units

Housing units assigned for this study are those listed on numbered lines of the Housing Unit Listing Sheet. Housing units listed on lines marked with an X are not assigned for this study.

One Household Face Sheet has been included in your materials for each assigned housing unit. The Household Face Sheets have been numbered to correspond to the red Housing Unit Number on the Housing Unit Listing Sheet.

Use each Household Face Sheet only for the specified Housing Unit #. If the housing unit is vacant, record that on the Household Face Sheet for that housing unit.

Example: On the Housing Unit Listing Sheet shown on the previous page, there are five assigned housing units. You would fill out Household Face Sheets for these housing units:

Housing Unit # 01	319 Front Street
02	317 Front Street, 2nd floor
03	301 Front Street
04	21 3rd Ave., 1st floor
05	11 3rd Ave.

On the Household Face Sheet for housing unit # 05, you would just note that the housing unit is vacant. You would not substitute another housing unit.

Notice that there are no housing unit numbers or X's below the red line on the yellow Housing Unit Listing Sheet. There are housing unit numbers recorded on the pink Housing Unit Listing form. In most cases, we have numbered more lines on the pink sheet than you will need to use. Face sheets corresponding to lines on the pink sheet that you do not use should be marked "No Housing Unit Listed" and returned to us.

If you don't use all the numbered lines on the yellow Housing Unit Listing sheets: In some blocks, you may find fewer housing units than we estimated. In those cases, there may be numbered lines that you do not use. The face sheets corresponding to those unused lines should be marked "No Housing Unit Listed" and returned to us.

DEFINITION OF A HOUSING UNIT

In general, a housing unit is a structure or part of a structure where a family or individual lives, or could live. For example:

A "one-family house" is one housing unit

A "two-family house" is two housing units

Each apartment in an apartment building is a housing unit

A vacant house or apartment is a housing unit (because someone could live there in the future)

A store or business is not a housing unit, but ... an apartment over or behind a store or business is a housing unit.

More specifically, a housing unit must have one or both of the following characteristics:

1. It has a separate entrance from the outside or from a common hall or lobby. In other words, you can get to it without going through someone else's living quarters.
2. It has cooking facilities for the exclusive use of the occupants. Cooking facilities may be a kitchen, or just a stove or hotplate, if that is used to prepare meals regularly. The cooking facilities are not shared by occupants of another apartment.

Following are some rules about special situations that you may encounter:

Group quarters: Prisons, hospitals, nursing homes, dormitories, fraternity houses, convents, and other institutions are not housing units. They are not included in your listings.

Rooming and boarding houses: If the owner or person in charge lives in the house, his room or apartment is always a housing unit, or part of a housing unit. Whether or not the other rented units are considered to be a part of that housing unit depends on how many there are:

If fewer than five rooms available for rent - these rooms (and their occupants) are considered to be part of the housing unit of the person in charge.

If five or more rooms available for rent - these rooms are considered to be group quarters and are not listed as part of your assignment.

Note, however, that when a large house has been divided in such a way that rooms have separate entrances from outside or from a common hall or lobby -- each room is considered a separate housing unit for listing purposes.

Hotels and motels: Hotel and motel units are not housing units unless they serve as permanent living quarters. Thus, a residential hotel will include some housing units (the rooms or suites of people who reside there permanently). Rooms in a transient hotel are not housing units.

Trailers, boats, tents, etc.: Any such quarters that are occupied as someone's permanent residence are housing units. If they are used for vacations only, they are not housing units.

Vacation or seasonal homes: These should be listed as housing units, even though they may be vacant part of the year. If your assigned area includes many seasonal homes, please note that fact for us.

Although seasonal homes are considered housing units and must be listed, it may or may not be appropriate to complete interviews with people living in seasonal homes.

- If the housing unit is occupied all week during the survey period, you should attempt to complete an interview there.
- If the housing unit is occupied only on weekends, you should not complete an interview. Just note on the Interview Face Sheet that the housing unit is occupied on weekends only.

Condemned buildings: Houses or apartment buildings that are vacant and have been condemned or boarded up awaiting demolition are not housing units. However, other vacant houses or apartments are housing units.

Migratory units: Units for migratory workers employed in farm work during the crop season are counted and/or listed whether they are occupied or not, provided they otherwise meet the definition of housing units. (Dormitories for migrant workers would be excluded because they are group quarters.)

WHOM TO INTERVIEW

For each assigned household, the Household Face Sheet (printed on buff paper) determines whom you are to interview. There are several forms of the Interview Face Sheet. The ages of the residents, and the instructions on the Face Sheet determine which of the following four possibilities will occur in that household:

1. complete youth interview and adult interview
2. complete youth interview only
3. complete adult interview only
4. complete no interview in that household

The listings of household members may be obtained from any adult resident. It is not necessary that listings be obtained from the head of household.

The general procedure for listing household residents and selection of respondent is as follows:

1. Ask Question A.1. on the Face Sheet. ("First, would you tell me whether anyone age 12 through 17 lives here?") If there are one or more persons age 12-17, you must complete the Youth Face Sheet (blue paper), then go back and complete the remainder of the Household Face Sheet. Instructions for filling out the Youth Face Sheet appear later in this section.

If there is anyone age 12-17, you will always try to complete a Youth Interview, except in the following interviewing locations:

Location Numbers Beginning with 391 or 591

Most of your Household Face Sheets do not have Question A.1. If Question A.1. appears on the Face Sheet, ask it, and complete a Youth Interview if there is someone age 12-17. If Question A.1. does not appear on the Face Sheet, no Youth Interview is to be done in that household.

Location Numbers Beginning with 491

No Youth Interviews are to be completed in your area. Question A.1. does not appear on any of your Household Face Sheets. You should disregard all instructions pertaining to the Youth Interview or the Youth Face Sheet.

2. Ask Question A.2., and list all residents age 18 through 34 in the first listing box on the Face Sheet. Record relationship to head of household, sex, and age of each person age 18-34. If there are no residents age 18 through 34, write "None" in the Age 18-34 listing box.

3. Ask Question A.3, and list all residents age 35 or older in the second listing box on the Face Sheet. If there are no residents age 35 or older, write "None" in the Age 35 or Older listing box.
4. Follow the instructions printed in Part C.1 of the Face Sheet. These instructions are not the same on all Face Sheets, so it is very important that you read carefully the instructions on each individual Face Sheet. The instructions in Part C.1 tell you how to proceed, depending on which of the following three possibilities is true for that household:
 - a. Household Adults are Age 18-34 only. (There is no one in the household age 35 or older)
The instruction on all forms of the Face Sheet says "Select Adult from this group". Proceed with parts C.2 and C.3 of the Face Sheet to determine which adult to interview.
 - b. There are adults in the household age 18-34 and age 35 or older. (You have listed residents in both of the listing boxes)
On some forms of the Face Sheet, you are instructed to "Select adult from Age Group 18-34". On other forms of the Face Sheet, you are instructed to "Select adult from Age Group 34 or older".

You would then proceed with parts C.2 and C.3 for whichever age group is designated in the instruction on that particular Face Sheet. You will never be instructed to interview two adults in the same household.
 - c. Household adults are age 35 or older only. (There is no one in the household age 18-34.)
On some forms of the Face Sheet, you are instructed to "Select an adult from this group". In that case, you will proceed with parts C.2 and C.3, and complete an Adult Interview.

On other forms of the Face Sheet, the instruction is "Do not interview an adult in this household". In that case, you will not complete parts C.2 and C.3 of the Face Sheet, and there will be no Adult Interview in that household. There will, however, be a Youth Interview if there is someone age 12-17.
5. Assign a number to each resident in the designated age group. Give number 1 to the oldest male in that age group, number 2 to the next oldest male, and so on. Then continue with females, oldest to youngest. If there are no male residents, start with the oldest female.

Assign numbers to residents in one age group only (the age group designated in the instructions in part C.1 of the Face Sheet).

6. Use the Selection Table to determine which adult in the designated age group is to be interviewed. Find the total number of residents in the designated age group in the top row of Selection Table C.3. Just below that number you will find the number of the person to be interviewed. Circle that number.

There are several different forms of the Household Face Sheet with different sets of numbers in the second row of the Selection Table. For example, in an age group with two eligible persons, Person #1 is selected about half of the time, and Person #2 is selected about half of the time.

7. Find the person whose number you have selected in the listing box for the designated age group and put a check (✓) beside his or her number in the "respondent" column of the listing box. This is the selected adult respondent. You are to interview him (or her) and no other adult. No substitution is permitted.

The Youth Household Face Sheet

You will use a Youth Interview Face Sheet whenever the answer to Question A.1 on the Household Face Sheet is "Yes." A supply of Youth Face Sheets is included with your materials. Use these sheets in the order in which the supply has been given to you.

Fill in Location Number and Housing Unit Number, as well as the address, in the box at the top of the sheet. This is the procedure to follow in filling in the remainder of the sheet.

1. List persons age 12-17 in the listing box. Record relationship to head of household, sex, and age.
2. Assign a number to each person listed. Give number 1 to the oldest male, number 2 to the next oldest male, and so on. Then continue with females, oldest to youngest. If there are no males age 12-17, start with the oldest female.
3. Use the Selection Table to determine which person age 12-17 is to be interviewed. Find the total number of residents age 12-17 in the top row of Selection Table C.2. Just below that number you will find the number of the person to be interviewed. Circle that number.

As is the case with the Household Face Sheet, there are a number of different forms of the Selection Table. Use the table as it appears on each individual Face Sheet.

On the following page is an example of how a correctly filled-out Household Face Sheet might look. Note these points:

- Residents age 18-34 are listed in the first listing box.
- Residents age 35 or older are listed in the second listing box.
- Residents are listed in terms of their relationship to the head of household.
- There are residents age 18-34 and 35 or older, and the instruction on this Face Sheet says, "Select adult from age group 18-34."
- A number was assigned to each resident in the designated age group (18-34 in this case). The son-in-law is number 1, because he is the oldest male in that age group.
- No numbers were assigned to residents in the other age group (35 or older in this case).
- The Selection Table for this Face Sheet indicates that for a household with 3 eligible persons (that is, 3 persons in the designated age group), the person to be interviewed is Number 2. That number is circled in the second row of the Selection Table, and there is a (✓) in the respondent column of the listing box for that person.

Location No. <u>193-5</u> Housing Unit No. <u>4</u>	Address (or description): <u>986 MAIN ST.</u>
--	--

HOUSEHOLD FACE SHEET

- A1. First, would you tell me whether anyone age 12 through 17 lives here?
- ☐ YES → COMPLETE YOUTH INTERVIEW FACE SHEET (BLUE PAPER); THEN COMPLETE REMAINDER OF THIS FACE SHEET FOR ADULTS.
- ☐ NO → CONTINUE WITH LISTING OF ADULT RESIDENTS.
- A2. How many people live here who are ages 18 through 34? (I don't need names, just their relationship to head of household.)
- A3. How about people who are age 35 or over?
- B. LIST ADULTS AND FILL IN SEX AND AGE BELOW.

	RELATIONSHIP (OR CONNECTION) TO HEAD OF HOUSEHOLD	SEX	AGE	NUMBER	RESPONDENT (✓)
AGE 18-34	DAUGHTER	F	20	3	
	SON-IN-LAW	M	20	1	
	SON	M	18	2	✓
AGE 35 OR OLDER	HEAD	M	45		
	WIFE	F	45		

- C1.
- | IF HOUSEHOLD ADULTS ARE | FOLLOW THIS INSTRUCTION |
|------------------------------------|---|
| 18-34 ONLY
(NO ONE 35 OR OLDER) | SELECT ADULT FROM THIS GROUP |
| 18-34 AND 35 OR OLDER | SELECT ADULT FROM AGE GROUP 18-34 |
| 35 OR OLDER ONLY
(NO ONE 18-34) | DO NOT INTERVIEW AN ADULT IN THIS HOUSEHOLD |
- C2. FOR DESIGNATED AGE GROUP, ASSIGN NUMBER TO EACH ELIGIBLE PERSON -- MALES FROM OLDEST TO YOUNGEST; THEN FEMALES FROM OLDEST TO YOUNGEST
- C3. USE SELECTION TABLE BELOW TO DETERMINE WHOM TO INTERVIEW, AND CHECK (✓) DESIGNATED RESPONDENT

If the number of eligible persons is . . .	1	2	3	4 or more
Interview the person numbered	1	2	(2)	2
(Circle correct number)				

FIELD PROCEDURES

Callbacks

Plan your time in the field to complete as many contacts and interviews as possible on each visit to the assigned area. It saves time in the long run if you plan to make many of your calls in the evening when you are more likely to find working people at home.

Callbacks should be planned at different times of the day and evening and on different days of the week.

Be persistent and complete as many interviews as possible within the time that has been allowed for your work on the assignment. You should plan to make at least four calls (an original call and at least three callbacks) to carry out the listing of persons in household and to complete an interview with either an adult or youth. If you are to complete interviews with both an adult and a youth, you may make up to four additional calls if necessary. In scheduling callbacks, however, you should select a time when you are likely to find both the assigned adult and the assigned youth at home.

Make more callbacks than the minimum specified above when you have a number of calls to make in the assigned area, or when you reasonably can expect to find respondents available for interview.

Your first contact at a sample household should always be a personal visit.

As a general rule, we do not recommend telephone contacts, but use your discretion if you feel that, after household residents are listed, a telephone contact would be helpful to set up an appointment with a given respondent.

"What do I do if ...?"

1. There is a change in the number of residents or the "status" of a housing unit after you make your first visit:

Example A. On your first visit to the housing unit you find that it is vacant. You record that fact on the Household Face Sheet. A few days later, you notice that a family moves in.

Do not change your report. The general rule is: Once it is clearly established that a housing unit is occupied or vacant, this classification is fixed for the duration of the study.

Example B. On your first visit to a housing unit, you list two residents of a housing unit (a head of household and wife). A few days later you return to interview the designated respondent. You find that an additional person has come to live in the household (the father of the head).

Do not change the resident listing. The general rule is: The composition of the household is fixed at the time you first speak to a responsible adult, and learn who lives there.

2. The respondent does not speak English:

Do your best to complete the interview, using another member of the household as an interpreter. But explain how you have proceeded with the interview in a note (the front of the questionnaire would be a good place for this note).

If you cannot complete the interview, explain the situation on back of the Household Face Sheet.

Points to remember about identification of materials.

1. Transfer the address of an assigned housing unit from the green address listing (for prelisted locations) or from the Housing Unit Listing Sheet (for locations that are not prelisted).
2. The Location # and Housing Unit # must be filled in on the Special Instructions page (p. 15) of the completed questionnaire, and on all extra forms or notes pertaining to the interview.

C. Written communications to interviewers



Response Analysis

Research Park, Route 206
Princeton, New Jersey 08540
(609) 921-3333

July 1971
RAC Study #3559

Dear Interviewer:

Prelistings are needed for a national probability study which will go in the field in mid-September. We will provide interviewers with maps and instructions for listing addresses of housing units in specific sample locations. The listings will be used for selection of housing units for the new study, and for mailing letters to selected housing units in advance of the interviewing assignment. All that is needed at this point is the address listing -- no interviewing.

The prelisting assignments will be mailed on August 9. All completed assignments must be in the mail by August 18.

Your acceptance of this assignment should be based on:

- your availability to spend two or three hours listing
- being able to meet the deadline for mailing of Wednesday, August 18

You will be listing in Location # _____, which means the following community: _____.

Enclosed with this letter is a postcard acknowledging receipt of this letter, and availability for this assignment. Please forward this card to us immediately.

Thank you for your prompt consideration and action.

Cordially,

Ruth Rickwell
Ruth Rickwell

Director of Interviewing Services

Robert E. Steen
Robert E. Steen
Administrative Assistant

agp



Response Analysis

Research Park, Route 206
Princeton, New Jersey 08540
(609) 921-3333

July 1971
RAC Study #3559

Dear Supervisor:

Prelistings are needed for a national probability study which will go in the field in mid-September. We will provide interviewers with maps and instructions for listing addresses of housing units in specific sample locations. The listings will be used for selection of housing units for the new study, and for mailing letters to selected housing units in advance of the interviewing assignment. All that is needed at this point is the address listing -- no interviewing.

The prelisting assignments will be mailed on August 9. All completed assignments must be in the mail by August 18.

The enclosed assignment location sheets indicate areas where listings are to be done.

The person(s) selected for this assignment should:

- Have experience listing for a probability sample and have demonstrated competence.
- Be local to the listing area. One person can handle more than one location if the locations are close to the interviewer's residence.
- Have 2 or 3 hours available for each location to do the listing.
- Be able to meet the deadline for mailing of Wednesday, August 18.

Please fill out the location assignment sheets with the name and address of the person to whom listing materials are to be sent for each location. Return as soon as possible one copy of this completed form to Response Analysis. Keep the other copy for your records. This must be in our office no later than August 2.

Thank you for your prompt consideration and action.

Cordially,

Ruth Rickwell (Mrs.)
Director of Interviewing Services

Robert E. Steen
Administrative Assistant

bm



Response Analysis

Research Park, Route 206
Princeton, New Jersey 08540
(609) 921-3333

August 9, 1971
RAC Study #3559

Dear Interviewer:

Enclosed are materials for your prelisting assignment on Study 3559. Read your instructions carefully. It is important that the listing be done accurately. If any material is missing call us collect immediately at (609)921-3340 (see prelisting instructions P. 1 for list of materials). If you have any questions, problems or difficulties with the instructions for the listing or your map, please call station-to-station collect to (609) 921-3333, and say you have a sampling problem. Someone at that number will help you.

When returning your assignment, make certain you return all materials. We cannot use the listings unless all of these materials are returned.

Check for: 1. The green assignment sheet
 2. The map or map sketch
 3. Yellow housing unit listing sheets for each block assignee

DEADLINE

You must have this assignment completed and in the mail no later than WEDNESDAY, AUGUST 18.

This is a very liberal deadline for an assignment which will normally require only 2 or 3 hours of work. We therefore request that you start on this assignment as soon as you receive it and mail it back to us within 2 or 3 days. The additional time is for the interviewers who might encounter problem situations of one kind or another (e.g., rural areas where bad weather could cause delay).

Thank you for working on this assignment.

Cordially,

Ruth Rickwell (Mrs.)
Director of Interviewing Services

Robert E. Steen
Administrative Assistant

jeh



Response Analysis

Research Park, Route 206
Princeton, New Jersey 08540
(609) 921-3333

August 9, 1971
RAC Study 3559

Dear Supervisor:

The prelisting assignments are being mailed Monday, August 9th. Please follow up with your interviewers so that we are assured of receiving this material back promptly.

Thank you for taking this assignment.

Cordially,

Ruth Rickwell (Mrs.)
Director of Interviewing Services

Robert E. Steen
Administrative Assistant

jeh

attachments



Response Analysis

Research Park, Route 206
Princeton, New Jersey 08540
(609) 921-3333

August 12, 1971
RAC Study #3559 Job Alert

Dear Interviewer:

Response Analysis will be fielding a national study in September and we would like you to participate in it. This letter explains the study, its schedule, the required training meeting and some administrative details. Please review and consider everything before you accept this assignment.

Description of Study

- Study will investigate national attitudes and knowledge on a wide range of social issues with an emphasis on the subject of marihuana.
- Study is funded by the National Commission on Marihuana and Drug Abuse. The commission is relying on this survey to provide insights and information.
- The major portion of the interviewing will be men and women 18 years of age and older. In some households there will also be a self-administered questionnaire--no interview--for young people (ages 12-17).

Incidentally, the interview is an unusually interesting one, and the subject matter not nearly as controversial in the interview as other subject areas which we have studied, such as attitudes towards erotic materials and sex.

Nevertheless, the topic of marihuana is a private one to some people. We have worked out a special procedure that will make you feel very comfortable about keeping the nature of the interview confidential.

Schedule and scope of study

Response Analysis personnel will be meeting with interviewers during the week of September 13th in regional training meetings. Interviewing will start immediately after training. The deadline for completing the assignment is Saturday, October 2.

The size of the average assignment will be 18 households. (This may range from 12 to 24). An initial call and up to three callbacks are to be made to obtain an interview with each of these households. As with all probability sampling assignments, the interviewer should plan to do at least half of the work during evenings and weekends.

The interview, which will include a self-administered questionnaire for the respondent, will take about 45 minutes to an hour.

Training Meetings

We are arranging for you to attend the regional training meeting in:

-

The training schedule will run from 9:00 a.m. to 5:00 p.m. with a luncheon break. Lunch will be paid for by Response Analysis.

Training Fee

Interviewers will be paid a training fee of \$20.00 for their time spent in travel and at the training session. The training fee will be paid to you after you start working on your assignment.

Transportation

You will be reimbursed for "reasonable" travel costs to and from the regional meeting. "Reasonable" is the method appropriate to get you to and from and you are to exercise your own good judgment considering the following:

- Travel by private automobile will be reimbursed at 10¢ per mile.
- Interviewers are expected to use ground transportation when the regional meeting is within 150 miles of their home.
- Air transportation is authorized for those people more than 150 miles from the regional meeting.
- Persons traveling by air are expected to use air coach (economy).

Page Three
August 12, 1971
RAC Study #3559 Job Alert

- You should determine the most suitable travel arrangement, and inform us of your plans on the enclosed sheet.

You may submit a request for advance (see enclosed form) for your anticipated travel costs. Complete and detailed receipts, including travel tickets of any kind, must be submitted with an expense report after the training session.

Meals

Response Analysis will reimburse the cost of meals required during travel to or from the training meetings. The guidelines of \$1.50 for breakfast and \$3.00 for dinner should be observed.

Overnight Accomodations

Interviewers who live within 50 miles of the training meeting are expected to commute on the day of the meeting.

Interviewers traveling over 50 miles may stay overnight at the motel used for the regional training meeting at Response Analysis expense (meals and other expenses must be approved in advance).

Please inform us of any overnight reservations you will require when returning the enclosed sheet. We will then make the appropriate reservation in your name.

Interviewing location

You will be doing your interviewing in portions of the following communities:

Location #

Please return the enclosed sheet within the next 4 days.

Cordially,

Ruth Rickwell (Mrs.)
Director of Interviewing Services

Robert E. Steen
Administrative Assistant

jeh

enclosures



Response Analysis

Research Park, Route 206
Princeton, New Jersey 08540
(609) 921-3333

August 11, 1971
RAC Study #3559
Description of the Study

- The Study will investigate national attitudes and knowledge on a wide range of social issues with emphasis on marihuana.
- Study is funded by the National Commission on Marihuana and Drug Abuse.
- Face-to-face probability sample interviewing. As with all probability sampling assignments, the interviewer should plan to do at least half of the work during evenings and weekends.
- The interviewer must attend a full day training session during the week of September 13th and be ready to start interviewing immediately after the training session without conflict.
- Each interviewer must be able to complete his/her assignment by an October 2 deadline.
- Interviewers will be paid a training fee of \$20.00 for their time spent in travel and at the training session. The training fee will be paid by the supervisor to each interviewer who attends and successfully completes the day of training.
- Your supervisor should assist you in making travel arrangements to the training session. All time and expense sheets should be turned in to your supervisor.
- Your training session will be held in:

jeh

Please complete this page if you are accepting this assignment.

I will travel to the training meeting by:

Private car ☐

Train ☐

Bus ☐

Plane ☐

☐ I will need no overnight motel reservations to attend the training meeting.

☐ Please make an overnight motel reservation for me for the following night(s) _____.

REQUEST FOR TRAVEL ADVANCE

Complete this section if you will require a travel advance to cover your travel expenses to the training meeting.

Itemize your anticipated travel expenses with as much detail as possible. Please do not include anticipated meal expenses; these should be submitted with receipts after they are incurred. Receipts must be submitted for all items, including travel tickets of any kind, before final payment on this study can be made. This form must be received by us before August 31.

Detailed Description of Anticipated Expenses Amount

From: _____

To: _____

Round Trip Mileage: _____

Approved: _____	Check # _____
Amount \$ _____	Amount \$ _____
Date _____	Date _____
	17A _____

Please complete and return this page to Response Analysis within four days.

Name _____ RAC ID# _____

Address _____

City, State _____ ZIP _____

Phone Number: Area Code (____) _____

Location #: _____

☐ I accept the assignment on the Marihuana Study (RAC #3559). I have read and reviewed all of the requirements of the study, and will be able to attend the training meeting and complete my assignment by the October 3 deadline. (Complete reverse side).

☐ I will not be able to accept this assignment because (please explain): _____

Signed: _____ Date: _____



Response Analysis

Research Park, Route 208
Princeton, New Jersey 08540
(609) 921-3333

August 18, 1971
RAC Study #3559

Dear Interviewer:

Enclosed are materials for your counting assignment on Study 3559. Read your instructions carefully. It is important that the counting be done accurately. If any material is missing call us collect immediately at (609) 921-3340 (see counting instructions P.1 for list of materials). If you have any questions, problems or difficulties with the instructions for the counting or your map, please call station-to-station collect to (609) 921-3333, and say you have a sampling problem. Someone at that number will help you.

When returning your assignment, make certain you return all materials. We cannot use the listings unless all of these materials are returned.

Check for: 1. The white count sheets
2. The map or map sketch

DEADLINE

You must have this assignment completed and in the mail no later than FRIDAY, AUGUST 27. It must be in our office by Tuesday, August 31.

This is a very liberal deadline for an assignment which will normally require only 2 or 3 hours of work. We therefore request that you start on this assignment as soon as you receive it and mail it back to us within 2 or 3 days. The additional time is for the interviewers who might encounter problem situations of one kind or another (e.g., rural areas where bad weather could cause delay).

Notify your supervisor of any problem. Recontact her when you mail your completed assignment. Submit your time and expense sheet to your supervisor.

Thank you for working on this assignment.

Cordially,
Ruth Rickwell (Mrs.)
Director of Interviewing Services

Robert E. Steen
Administrative Assistant

jeh
enclosures

D. Written communications to respondent households



CONSUMER STUDIES • SOCIAL RESEARCH • MONITOR SURVEYS

Response Analysis Corporation

September 1971

Dear Resident:

Within the next week or so, an interviewer will visit to ask someone in your household to take part in an important national survey.

The interview is mostly a series of questions about people's opinions on national and local issues.

Your household was selected as part of a nationwide cross-section of the public. All households are picked at random by statistical means.

Important: No one will try to sell you anything. This is strictly research, and research is our only business.

Our interviewers are personally and carefully trained. They are courteous and polite, and know how to help make an interview enjoyable and interesting.

No one will ever connect your name with your opinions. We punch your answers on an IBM card, and then throw away the interviews.

We look forward to your cooperation when our interviewer calls on you. We think you will enjoy the interview. It is an important survey. The interviewer will tell you whatever you want to know about it.

If you have any questions about the survey or our company, call me at our Princeton headquarters. The number is (609) 921-3333.

Sincerely,

Diane Schraye
Survey Director

agp



Response Analysis

Research Park, Route 206
Princeton, New Jersey 08540
(609) 921-3333

Dear Resident:

We are a polling organization. Our computer has picked 2,000 households to be a cross-section of national opinions for a survey of important social issues. Your household is in that 2,000.

We understand from our interviewer in your area that the interview with you has not yet been done.

The research we are doing can benefit the whole country. We badly need your help in order to have a true cross-section of the United States.

Please keep these points in mind:

- Nobody will try to sell you anything, now or ever, as a result of the interview. Research is our only business.
- There is no way that anyone can connect you with your opinions. Your name is never even put on the interview form.
- The whole thing takes less than an hour, and it's very enjoyable.
- You can even get a copy of the results, at no cost, if you want to know how the research came out.

Any questions? Call me collect (609) 921-3333, between 8:30 a.m. and 5:00 p.m. Remember the time zone if you do not live in the East. If I happen to be out just leave your name and number and I'll get back to you.

Thank you very much. It's important. It will be interesting. We'll appreciate your cooperation when our interviewer comes back.

Sincerely,

Herbert I. Abelson, Ph.D.
President

agp

E. Internal procedures

Editing Instructions

Check Question 8. Each issue listed under the Question A - F should have a circled answer.

Question 9 - At least one category should be circled even if it is "R" (no answer).

Question 14 - At least one item should be circled.

Question 18 - Only one answer (1, 2, 3 or 4) should be circled.

Question 24 - 1, 2, 3, 4, 5, 6 or 8 should be circled for items a, b, c & d.

Question 29 - 33 - One statement should be circled for each question.

Question 38 - One circled answer.

Question 39 - One circled answer for most respondents two circled answers for students.

Question 47 - If the chief wage earner in the household is employed check industry and occupation question. Make sure both have been filled in properly. (see attached).

Question 50 - Income should be circled or "no income" should be circled or "don't know refused" circled. With "don't know's" the interviewer should have estimated income and circled one income category.

Question 56 - Race should be circled.

Edit 100 questionnaires and hold out every questionnaire that does not meet with all the above specs.

MARIHUANA CHECK-IN

Face Sheets

1. Receive face sheets. Remove correspondence, time sheets, etc.

Check for HU # on blue youth face sheets. If it is missing try to determine it from other information in the envelope. If it cannot be resolved give the offending face sheet to Carol.

Sort buff from blue. Pass the blue face sheets on to step 11.

2. Buff adult face sheets: Check Q. A1. There are four possible situations:

- (1) Q. A1 is answered "Yes"
- (2) Q. A1 is answered "No"
- (3) Q. A1 is not answered or a qualified answer is given
- (4) Q. A1 is not asked

Sort the buff face sheets into these four categories.

3. If Q. A1 is answered "Yes" a blue face sheet should have been filled out. Pass these buff adult face sheet on to step 7.
4. If Q. A1 is answered "No" enter a 55 t/c on the blue 9559 field record. Pass these face sheets on to step 7.
5. If Q. A1 is not asked for a housing unit (some households in Chicago and Washington, D.C.; all households in Nebraska) enter a 43 t/c on the blue 9559 field record sheet. All youth t/c decisions should be indicated on the back top left of the face sheet.
6. If Q. A1 is not answered or a qualified answer is given, the face sheet should be classified and 9559 field recorded in one of the following ways:

Youth RDC System

t/c	41	Holding because of unresolved error code
	42	Not eligible: vacant
	43	Not eligible: nonexistent; Q. A1 not asked
	44	Not eligible: Q. A1 answered "No" -- no youth in household
	46	Not determined if youth in household (Q. A1 not answered). Includes NAH, some REF.
	47	Youth in household (Q. A1 answered "Yes"). Unable to list or determine which youth to interview (determined from blue face sheet or comment on buff).
	48	Youth respondent selected. Unable to interview because respondent not available (sickness included). (RA on blue face sheet.)
	49	Refusal, parental intervention. Other non-interview situa- tions. (Respondent must have been selected for a 49 t/c.)

- . Sort adult face sheets for completed adult interviews from adult face sheets for non-interview situations.

Pass face sheets for completed interviews on to step 10.

- . Enter the appropriate adult non-interview t/c on the 3559 buff field record sheet. Copy your decision on the back upper right corner.

Adult RDC System

t/c	41	Holding because of unresolved error code
	42	Not eligible: vacant
	43	Not eligible: nonexistent; other not eligible
	44	Not eligible: adult over 35 not to be interviewed per C1. (Adult listing must be complete.)
	45	Completed interview
	46	Adult composition of household not determined -- listing not done (NAH)
	47	Not to be used on adult RDC
	48	Correct respondent selected. Unable to interview because respondent not available (RA) (sickness included).
	49	Refusal, incorrect respondent, other non-interview situations.

- . File non-interview face sheets by location number for potential reassignment.
- . Check adult face sheets for complete interviews for correct use of selection procedures. Check against age and sex listing. If problematical inform Bob. Place complete face sheets on shelf.
- . Sort blue youth face sheets for completed youth interviews from youth face sheets for non-interview situations. Place face sheets for completed youth interviews on the shelf.
- . Enter the appropriate youth non-interview t/c on the 9559 blue field record sheet (see step 6).
- . File non-interview face sheets by location number for possible reassignment.

ERROR CODE

SUMMARY

For Adult and Youth Questionnaires

Error code on top left of questionnaire.

<u>Error Code</u>	<u>Reason</u>
A	Location # and HU# cannot be determined
B	Adults only: Orange SAQ missing.
C	Adults only: White interview missing.
D	Adults only: One or more pages on white interview blank.
E	Less than half of the SAQ filled out.
F	Discrepancy in sex between face sheet and questionnaire.
G	Discrepancy in age between face sheet and questionnaire.
H	No face sheet received for questionnaire

MARIHUANA CHECK-IN

Questionnaires

1. Receive mail. Slit open envelopes. Sort youth from adult.
2. Adults: Remove interview and SAQ from envelope. Check interview for location and HU# (p. 15).

If missing, check for location and HU# on the envelope. Copy it into the interview if it is there. If it cannot be determined write the error code A on the top left of the interview and SAQ.

Copy the location # and HU# onto the top center of the orange SAQ.

Place the orange SAQ inside the white interview at p. 15.

If the Orange SAQ is missing write the error code B on the top left of the interview.

If the white interview is missing write the error code C on top left of the orange SAQ.

If the interview is from Chicago, Omaha or Washington, D. C. (i.e. if the location number starts with 391, 491 or 591) place in a pile for special sample serialization.

3. Serialize every adult questionnaire returned from the regular sample starting at 1001. Serialize every adult questionnaire returned from the special sample (locations starting with 391, 491 or 591) starting at 4001.

Duplicate serial numbers must be assigned to the adult interview and adult SAQ from the same household. Serialization #'s should be stamped at the top right of each questionnaire.

Those interviews with an error code (A, B, or C) should be serialized along with the rest of the interviews.

4. All interviews without error codes should be 45 field recorded on the buff 3559 field record sheet. The interviewer ID# and the questionnaire # must be included on the field record entry.

Interviews with error code B or C should receive a 41 field record entry. ID# and questionnaire # should not be included.

Interviews with error code A cannot be entered on the field record (no location or HU# available).

5. Quickly fan through each interview and SAQ.

If one or more pages in the interview are completely blank write the error code D on the top left of the interview.

If less than half of the SAQ has been filled out write the error code E on the top left of the interview.

6. Sort the interviews by the first digit of the location number.
7. Record age (q. 38) and sex (q. 55) of the respondent on the listing sheet. If there is a discrepancy write the error code F for a discrepancy in sex and the error code G for a discrepancy in age on the top left of the interview.
8. Note interviewers with error codes. Hold for review by Herb.
9. Separate SAQ's from interviews and hold aside for coding.

- - - - -

1. Youth: Remove SAQ from envelope. Check interview for location and HU# (Code number must be 7 digits).

If missing, check for location and HU# on the envelope. Copy it into the interview if it is there. If it cannot be determined write the error code A on the top left of the SAQ.

2. Serialize every youth questionnaire returned from the regular sample starting at 5001.

Serialization #'s should be stamped at the top right of each youth SAQ.

Those interviews with error code A should be serialized along with the rest of the interviews.

3. All interviews without error code A should be 45 field recorded on the buff 3559 field record sheet. The interviewer ID# and the questionnaire # must be included on the field record entry.

Interviews with error code A cannot be entered on the field record (no location or HU# available).

4. Quickly fan through each SAQ.

If less than half of the SAQ has been filled out write the error code E on the top left of the interview.

5. Sort the interviews by the first digit of the location number.
6. Record sex (q. 1) and age (q. 2) of the respondent on the listing sheet. If there is a discrepancy write the error code F for a discrepancy in sex and the error code G for a discrepancy in age on the top left of the interview.
7. Note interviews with any error code. Hold for review by Herb.
8. Hold aside for coding.

MARIHUANA CHECK-IN

Validations

1. Receive postcards in Philadelphia.
2. Log postcards on the white Validation Selection form.
3. Postcards do not have to have name, address, phone number, date of interview, or interviewer I.D. to be logged.

Cards which fall on the highlighted selection lines must have:

- A. A complete location number.
- B. A Housing unit number.
- C. Adult or youth designation.

If any of these are missing do not log the card, put the card in the problem pile, and go on to the next card.

In filling out the selected for validation lines on the Validation Selection form the proper code for an adult or youth interview must be recorded in the first column (3 code for adults; 9 code for youth). The date, location number and housing unit number must also be recorded. All of this information must also be recorded on the Validation Result Form and the Additional Validation Form.

4. Cards which do not fall on the selection lines only require that the location number be logged.

If this number is missing, do not log the card, put the card in the problem pile and go on to the next card.

5. All cards not selected for validation should be filed by the first two digits of their location number.
6. Cards logged on selection lines should be paired as indicated with a paper clip.
7. Pairs of cards should then be given to the interviewers. One respondent should be interviewed out of each pair. Interviewers should use the attached script.
8. The history of attempted contacts at a household should be recorded on the front (address side) of the postcard.
9. If no phone number or an incomplete or non-working number is given on one of the cards in a pair, the other one must be contacted. If both cards have incomplete or non-working phone numbers they cannot be contacted.

Any postcard selected for validation that is not contacted for any reason should be marked NC on the front (address side) of the postcard by the interviewer.

The proper result code for that postcard must then be entered on the blue Validation Result Form (Result Code 1 for no contact).

10. Validation interviews satisfactorily completed with no problems should be noted as "OK" on the postcard front by the interviewer and returned for recording as "No Problem" on the Validation Result Form. (Result Code 3).
11. Postcards not contacted for any reason (other card in pair interviewed, no answer, wrong number, respondent not available, busy, etc.) should be marked "NC" and returned for recording as "no contact" on the blue Validation Result Form. (Result Code 1).
12. During the validation interview answers to questions which indicate "possible problems" should be recorded on the front of the post card. Validations which present possible problems should be marked "PROBLEM" and brought to the attention of Howard Blum.
13. When possible problem situations are reported to Howard by the interviewers he should:
 - A. Record them as possible problems (Result code 2) on the Validation Result Form.
 - B. Pull additional postcards from the file for that location and record them on the pink Additional Validation Form.

Cards where attempts have already been made to contact the respondent may be used again.
 - C. Give the additional cards to the interviewers.
 - D. Record the results of the additional interviews on the Validation Result Form.
 - E. Inform Princeton of the problems and their progress.
14. Response Analysis may request additional validations for some locations. As these additional postcards are pulled for validation they have to be recorded on the Additional Validation Form.
15. Mail completed Validation Selection Forms, Validation Result Forms and Additional Validation Forms to Response Analysis.
16. Keep Response Analysis informed of the status of the problem pile.

17. A few notes on the questionnaire script:

- A. If asked, interviewers should say they are with the Interview Validation Service in Philadelphia.
- B. The questionnaire referred to in Question 7 is orange.
- C. Interviewers were instructed to mark their postcards "incomplete" if they were unable to administer the self-administered questionnaire to an adult respondent.

The point of Question 7 is to make certain that the interviewer asked the respondent to fill out a questionnaire.

If the respondent says he was asked but refused to fill out an SAQ and the card is marked incomplete there is no validation problem.

The validation problem exists when the respondent was not asked to fill out the SAQ.

18. I expect cards will be sent to you that should not have been sent. Cards are supposed to be sent only for completed interviews. If postcards are received marked refused, not at home, vacant, or anything else that indicates that no interview was conducted they should be put in the problem pile.
19. Any questions, please call.

Attached is a complete list of the 5 digit location numbers being used on this study. Note the following properties of a location number and a housing unit number.

326 05 04

Location Number

First digit - must be 1 - 9 (never zero)

Second digit - must be 0, 1, 2, 3 or 9.

Third digit - must be 1 - 9 (never zero)

Fourth digit - usually zero, may be 1 or 2

Fifth digit - must be 1 - 9 (never zero)

Housing Unit Numbers

Must be 01 - 99. Sixth digit must never be blank.

Validation Selection Form

3 = Adult
9 = Youth

Col. 1					11	LOCATION #		12	16	18	
FILE					3/9	Date		8 1 0	.	.	HU #
						.	.		.		
FILE					3/9	Date		8 1 0	.	.	HU #
						.	.		.		
FILE					3/9	Date		8 1 0	.	.	HU #
						.	.		.		
FILE					3/9	Date		8 1 0	.	.	HU #
						.	.		.		
FILE					3/9	Date		8 1 0	.	.	HU #
						.	.		.		

Pair
Selected
for
Validation

Pair
Selected
for
Validation

Pair
Selected
for
Validation

When completed, return this form to Response Analysis.

Validation Result Codes

1 = NC = No Contact with Respondent
2 = PROBLEM = Possible Problem
3 = OK = Interview Completed, No Problem

3 = Adult
9 = Youth

Col. 1	2	5	9	10	12	16	18
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[illegible]

Additional Validations Form

3 = Adult

9 = Youth

Col. 1

2

5

9

12

16 | 18

18

[illegible]

SOCIAL ISSUES VALIDATION

Hello. I'm _____. In the last several weeks Response Analysis Corporation has been conducting a nationwide survey on social issues. Our records show you might have been interviewed. Do you remember being interviewed or filling out a questionnaire?

There are a few questions I would like to ask you about the interview. It will only take two or three minutes of your time.

1. First, did the interviewer visit you personally at your home to interview you, or did she interview you on the telephone?
(Answer should be personally at home)
2. Can you tell me about how long the interview took?
(minimum of 25 minutes)
3. Would you mind telling me some of the issues covered during the interview?
(Marihuana and/or drugs should be mentioned).
4. If marihuana and/or drugs not mentioned in Q. 3 ask:

Do you remember being asked questions about drugs and marihuana?
(the answer to this question is yes)

Ask of Youths Only

5. In the interview did you fill out a questionnaire booklet. (The booklet had a green cover - all respondents filled this out - some may have asked the interviewer to help them).

Ask of Adults Only

6. During the interview were you asked questions about:

Your idea of what a marihuana user is like?

State and federal laws about marihuana?
(Both questions were on interview).

7. Did the interviewer also ask you to fill out a questionnaire booklet?
(The answer to this should be yes, some respondents might have refused.
If so, postcard should be marked incomplete)

For Adult and Youth

8. Was the interviewer there with you while you were filling out the questionnaire booklet?
(Interviewer was required to be present when questionnaire booklet was filled out).

Again, thank you for your cooperation.

part six social policy aspects

I. The Constitutional Dimensions of Marihuana Control

Public policy for marihuana must be defined within the bounds of our constitutional system. So far, the single most important constraint has been the constitutionally required procedural safeguards which apply to all criminal prosecutions. This area of the law has undergone dramatic transformations during the past decade and each new development has produced thoroughgoing analysis and debate. With this extensive theoretical background, the Commission, in its law enforcement study, focused its attention on the actual effect of these restrictions on enforcement of the marihuana laws.

The purpose of this chapter is to analyze two salient constitutional dimensions of marihuana control which have received less widespread attention: the extent to which the Constitution imposes *substantive* limitations on the prohibition of possession of the drug for personal use; and the extent to which the Federal Government can adopt a social and legal policy for marihuana and impose that policy on the states.

*This chapter is based on materials prepared by Messrs. Russell H. Carpenter, Jr., Charles W. Petty, Jr., Vincent L. Ricci, Jerry L. Shulman, Geoffrey R. W. Smith, and Mrs. Marion Jetton of the District of Columbia bar.

Substantive Limitations on the Criminal Law

Possession of marihuana is currently a crime under the laws of every state. As marihuana use has spread, and the number of prosecutions under such laws has risen, these laws have come under increasing attack as unconstitutional infringements by government of individual rights.

Assuming *arguendo* that the state may prohibit altogether the manufacture, sale, or other distribution of marihuana (including possession with the intent to sell), and also may prohibit certain marihuana-related activities, such as driving an automobile while under its influence, the question remains whether the state may constitutionally reach the mere private possession of marihuana for personal use.

Challenges to prosecutions for mere possession have varied from a claim premised on a constitutional right to privacy¹—or a concomitant attack on the reach of the police power²—to claims based on the First Amendment's guarantee of freedom

¹ See, e.g., *United States v. Drotar*, 416 F. 2d 914, 917 (5th Cir. 1969), *vacated on other grounds*, 402 U.S. 939 (1971).

² *Clark v. Craven*, 437 F. 2d 1202 (9th Cir. 1971).

of religion³ and the 14th Amendment's equal protection clause.⁴

Since these arguments have so far been unsuccessful, this chapter analyzes the likelihood that they will prevail if there is either an evolution of current constitutional doctrines, a change from the facts heretofore passed on by the courts, or both.

THE CURRENT STATE OF THE LAW

To date, the statutes proscribing possession of marihuana for personal use have been upheld against all substantive constitutional attack.^{5A}

California, for instance, upheld a marihuana possession conviction against an equal protection/due process argument in *People v. Aguilar*, 257 Cal. App. 2d 597, 65 Cal. Rptr. 171 (Dist. Ct. App.), cert. denied, 393 U.S. 970 (1968). More recently, Florida upheld its statute against a privacy argument. *Borras v. Florida*, 229 So. 2d 244 (1969), appeal dismissed, 400 U.S. 808 (1970). And Massachusetts, in a case in which broad constitutional objections were argued by the defendant, upheld that state's possession law. *Commonwealth v. Leis*, 355 Mass. 189, 243 N.E.2d 898 (1969).

There is little doubt then, but that current judicial opinion considers governmental regulation of possession of marihuana to be neither beyond

³ *Leary v. United States*, 383 F. 2d 851 (5th Cir. 1967), rev'd on other grounds, 395 U.S. 6 (1969); *People v. Woody*, 61 Cal. 2d 716, 394 P. 2d 813, 40 Cal. Rptr. 69 (1964).

⁴ See e.g., *Commonwealth v. Leis*, 355 Mass. 189, 243 N.E. 2d 898 (1969).

^{5A} After this Appendix had gone to press, the Michigan Supreme Court decided *People v. Sinclair* and *People v. Lorentzen*. In *Sinclair*, the conviction for possession of two marihuana cigarettes was reversed 6 to 0 (one justice abstained). Four judges voted to overturn the conviction and the other two voted to reverse the sentence only.

The judges differed considerably in their rationale for the decision. Three justices (Williams, T. M. Kavanagh, and Swainson) voted to strike the statute down on equal protection grounds and a fourth (T. G. Kavanagh) on right to privacy grounds. (Judges Swainson and T. G. Kavanagh also ruled that the evidence (2 joints), which had been obtained as a result of police conduct which the trial judge had concluded was entrapment in dismissing a sale count before trial, should also be excluded). The two judges (Brennan and Adams) voting to reverse the sentence only, did so on cruel and unusual punishment grounds.

In the *Lorentzen* case, the court by a 6 to 0 vote struck down the 20-year mandatory minimum for sale of marihuana. By a 4 to 2 vote, however, the court remanded the defendant for resentencing, presumably under the provisions of the general felony statute (4-year maximum). One judge, T. G. Kavanagh, issued a separate opinion in *Lorentzen* stating that the constitutional right to smoke marihuana upon which he relied in *Sinclair* necessarily applies to sale as well.

the state's police power nor subject to special constitutional protection.

Law, especially constitutional law, is not static, however. As Mr. Justice Brandeis noted, "[constitutional] clauses guaranteeing to the individual protection against specific abuses of power, must have a . . . capacity of adaptation to a changing world." *Olmstead v. United States*, 277 U.S. 438, 472 (1928) (Brandeis, J., dissenting). Such capacity for adaptation is clearly visible in the expansion of constitutional protection over the past several decades. Compare, e.g., *Olmstead v. United States*, 277 U.S. 438 (1928), and *Katz v. United States*, 389 U.S. 347 (1967) (wiretapping under the Fourth and Fifth Amendments), or *Plessy v. Ferguson*, 163 U.S. 537 (1896), and *Brown v. Board of Education*, 347 U.S. 483 (1954) (school desegregation).

It therefore behooves anyone considering the constitutional claims of those opposing prohibition of marihuana possession to scan the constitutional horizon for doctrines which, leavened by time, may rise to encompass such a plea.

"THE RIGHT TO BE LET ALONE"

In 1928, the Supreme Court ruled that phone taps were not within the protection of the Fourth or Fifth Amendment;⁶ in dissent Justice Brandeis raised the banner of personal inviolability as a protection against undue state interference:

The makers of our Constitution undertook to secure conditions favorable to the pursuit of happiness. They recognized the significance of man's spiritual nature, of his feelings and of his intellect. They knew that only a part of the pain, pleasure and satisfactions of life are to be found in material things. They sought to protect Americans in their beliefs, their thoughts, their emotions and their sensations. They conferred, as against the Government, the right to be let alone—the most comprehensive of rights and the right most valued by civilized men.⁷

This dissent has now become the law in cases dealing with criminal investigations and procedures. See, e.g., *Mapp v. Ohio*, 367 U.S. 643 (1961) (Fourth Amendment); *Katz v. United States*, 389 U.S. 347 (1967) (Fourth Amendment); *Miranda v. Arizona*, 384 U.S. 436 (1966) (Fifth Amendment).

The Supreme Court has, in such cases, affirmed a citizen's right to be free from unjustified governmental intrusion.

A more difficult question arises when the right of personal privacy espoused by Brandeis conflicts with substantive governmental goals. It is

⁶ *Olmstead v. United States*, 277 U.S. 438 (1928), overruled in *Katz v. United States*, 389 U.S. 347 (1967).

⁷ 277 U.S. at 478 (Brandeis, J., dissenting).

one thing to tell the legislative and executive departments that the Constitution requires that they obey strict procedural standards in applying rules of behavior; it is a far greater restriction on government power to declare that the Constitution limits the reach of the rules themselves. And, a claim to a constitutional right to use marihuana presupposes just such a restriction on substantive rulemaking.

Protection against government invasion of personal substantive rights is undoubtedly within the judicial function if the right asserted is explicitly rooted in an express constitutional provision. For instance the Supreme Court has, in general, upheld the right of free speech,⁷ freedom of religious beliefs,⁸ and freedom of assembly,⁹ all explicitly guaranteed in the First Amendment. But there is no constitutional provision expressly granting a right to smoke marihuana; nor is there a provision explicitly establishing Brandeis' "right to be let alone" as a substantive protection.

When faced with a very similar constitutional void in the past, the Supreme Court has nevertheless acted to protect a "fundamental personal liberty," or to secure "basic values 'implicit in the concept of ordered liberty.'" *Griswold v. Connecticut*, 381 U.S. 479, 497-98, 500 (1965), despite the lack of an express constitutional mandate.

The Justices may differ on the source of their authority, *see, e.g.*, the opinions of Justices Douglas, Goldberg and Harlan in *Griswold*, *supra*. Nonetheless, the Supreme Court has on three recent occasions invoked a right involving "privacy"—not enumerated in the Bill of Rights—to bar a prosecution under an otherwise valid state criminal statute.

In *Griswold*, *supra*, the Court dealt with a Connecticut statute which made it a crime to aid and abet anyone using contraceptives for birth control purposes. The defendants sought to void their conviction by claiming that the "crime" they supposedly abetted, the use of contraceptives by married adults, was not an act which the state could constitutionally prohibit. If the use of contraceptives by married couples was permissible they then reasoned, it could be no crime to aid and abet such use. The Court, in a spate of opinions, agreed with both points of this argument.

Justice Douglas, in an opinion subscribed to by a majority of the Court, analyzed past cases in which the Court had protected nonenumerated substantive constitutional rights against state

action.¹⁰ From such examples, Douglas extracted the principle that the Bill of Rights, in addition to protecting enumerated rights, casts a penumbra of ancillary rights to which the Supreme Court must give "life and substance" as circumstances require.

Included within this penumbra is a guarantee of "zones of privacy" which are "protected from governmental interference." 381 U.S. at 484. In the instant case, Justice Douglas and most of his brethren deemed the privacy of the marital relationship to be one of those personal liberties so fundamental to the social fabric as to fall within this penumbral protection:

The present case, then, concerns a relationship lying within the zone of privacy created by several fundamental constitutional guarantees. And it concerns a law which, in forbidding the *use* of contraceptives rather than regulating their manufacture or sale, seeks to achieve its goals by means having a maximum destructive impact upon that relationship. Such a law cannot stand in light of the familiar principle, so often applied by this Court, that a "governmental purpose to control or prevent activities constitutionally subject to state regulation may not be achieved by means which sweep unnecessarily broadly and thereby invade the area of protected freedoms." *NAACP v. Alabama*, 377 U.S. 288, 307. Would we allow the police to search the sacred precincts of marital bedrooms for telltale signs of the use of contraceptives? The very idea is repulsive to the notions of privacy surrounding the marriage relationship.

We deal with a right of privacy older than the Bill of Rights—older than our political parties, older than our school system. Marriage is a coming together for better or for worse, hopefully enduring, and intimate to the degree of being sacred. It is an association that promotes a way of life, not causes; a harmony in living, not political faiths; a bilateral loyalty, not commercial or social projects. Yet it is an association for as noble a purpose as any involved in our prior decisions. 381 U.S. at 485-86.

Justices Goldberg, Warren and Brennan agreed with the Douglas opinion, but added a concurrence going even further. In Justice Goldberg's words, "the concept of liberty protects those personal rights that are fundamental, and is not confined to the specific terms of the Bill of Rights." 381 U.S. at 486.¹¹

Justice Harlan concurred in the result, basing his opinion on the due process clause of the 14th Amendment. In Justice Harlan's view, the right to privacy in one's marital relationship is among

¹⁰ *See, e.g.*, *NAACP v. Alabama*, 357 U.S. 449 (1958) (right of association); *Pierce v. Society of Sisters*, 268 U.S. 510 (1925) (right to choose one's school); *Meyer v. Nebraska*, 262 U.S. 390 (1923) (right to learn a foreign language).

¹¹ It was in this context that Justice Goldberg made his often discussed reference to the Ninth Amendment, in an attempt to show that the framers of the Constitution had never intended to limit the sphere of protected fundamental liberties to those enumerated in the Bill of Rights, 381 U.S. at 492.

⁷ *Thomas v. Collins*, 323 U.S. 516 (1945).

⁸ *Sherbert v. Verner*, 374 U.S. 398 (1963).

⁹ *De Jonge v. Oregon*, 299 U.S. 353 (1937).

the fundamental liberties "implicit in the concept of ordered liberty" protected by the 14th Amendment without reference to the Bill of Rights.

A solid majority of the Supreme Court agreed in *Griswold* that some principle rooted in the Constitution protected the use of contraceptives by married couples from any substantive government prohibition.

Griswold did not declare a general right to use contraceptives, however. In fact none of the opinions in the case even deals with the issues of birth control or sexual relations on the merits. Instead, the Court's reasoning relates only to the right of a husband and wife to act as they choose within the privacy of the marital relationship.

Thus *Griswold's* constitutional protection is not tied expressly to the substantive act performed. Rather one must look to the context in which it performed, for it is the context which is being protected. And that context is defined by two elements, the marital relationship and privacy.

In *Stanley v. Georgia*, 394 U.S. 557 (1969), a more recent case involving obscenity, the Court's reasoning again suggests that a private context might afford protection of constitutional dimensions to otherwise unprotected conduct.

Earlier, in *Roth v. United States*, 354 U.S. 476 (1957), the Court had excluded obscenity from the protection afforded to free speech by the First Amendment. *Roth*, however, dealt with the distribution of obscene matter; in *Stanley* the Court faced a situation in which the defendant was charged solely with possession of obscene material for his own private use and gratification.

Justice Marshall, speaking for the Court, barred any prosecution for purely private possession of even clearly obscene material. The rationale of the opinion is somewhat cloudy, since Justice Marshall speaks of two fundamental rights involved:

(1) [T]he Constitution protects the right to receive information and ideas.

(2) [A]lso fundamental is the right to be free, except in very limited circumstances, from unwanted governmental intrusions into one's privacy. 394 U.S. at 564.

The right to receive information is, of course, basic to the First Amendment, *Meyer v. Nebraska*, 262 U.S. 390 (1923), and would ordinarily suffice to protect possession of any written material. However, obscenity is still an exception to the First Amendment, although the exclusion has apparently narrowed in recent years. See, e.g., *A Book Named "John Cleland's Memoirs of A Woman of Pleasure" v. Attorney General*, 383 U.S. 413 (1966).

The Court could not, therefore, simply rely on the First Amendment's guarantee of freedom of

speech to overturn the conviction.¹² But it is equally clear that the Court did not simply rely on the "right" of privacy alone to void the prosecution:

What we have said in no way infringes upon the power of the State or Federal Government to make possession of other items, such as narcotics, firearms, or stolen goods, a crime. Our holding in the present case turns upon the Georgia statute's infringement of fundamental liberties protected by the First and Fourteenth Amendments. No First Amendment rights are involved in most statutes making mere possession criminal. 394 U.S. at 568 n.11.

Once again, as in *Griswold*, the Court was dealing with substantive conduct not accorded express constitutional protection—the use of obscene materials; but the use of such materials in private became protected because the "right to receive information and ideas" was affected.

Under this view of these "privacy" cases, the Court has not yet extended a full measure of protection to all private acts, but it has recognized "privacy" as a catalytic force in constitutional adjudication. Standing alone, *Stanley* and *Griswold* will not protect marihuana users from prosecution.¹³ There is the possibility, however, that the "right to be free . . . from unwarranted governmental intrusions into one's privacy" may itself evolve into a substantive constitutional protection for any private act.

Since *Griswold* and *Stanley*, state courts and lower federal courts have grappled with this issue in cases attacking anti-abortion statutes.

While the courts have split on the issue,¹⁴ all have acknowledged the existence of the "right to

¹² Justice Marshall made this clear when he dealt with Georgia's argument that laws banning private possession of obscene material are necessary to reinforce laws against its distribution and manufacture. Instead of declaring such laws also beyond the constitutional pale on First Amendment grounds, Justice Marshall indicated that only private use of obscenity was being protected here:

"[M]ere categorization . . . as 'obscene' is insufficient justification for such a drastic invasion of personal liberties. . . . *Whatever may be the justifications for other statutes regulating obscenity, we do not think they reach into the privacy of one's own home.*" 394 U.S. at 565 (emphasis added).

¹³ *People v. Sinclair*, 30 Mich. App. 473, 186 N.W. 2d 767, (1971); *Miller v. Texas*, 458 S.W. 2d 680 (Ct. Crim. App. 1970).

¹⁴ Compare *Doe v. Scott*, 321 F. Supp. 1385, 1389-90 (N.D. Ill. 1971) (Illinois statute voided as a violation of a mother's right to privacy) with *Steinberg v. Brown*, 321 F. Supp. 741, 745-46 (N.D. Ohio 1970) (Ohio statute upheld as valid state protection of the fetus). Fetal rights are relative; at least one court has acknowledged that, while a fetus may have rights against a third party for injury while "en ventre de sa mere," it does not have sufficient status for the state to restrict its mother's wish to abort. *People v. Belous*, 71 Cal. 2d 964, 458 P.2d 194, 80 Cal. Rptr. 354 (1969), cert. denied, 397 U.S. 915 (1970).

privacy" claimed by the mother.¹⁵ Those upholding the statutes, despite the privacy claim, have done so only after finding that the state had met its burden of showing an overriding interest in the protection of the unborn child.¹⁶

It is possible that privacy is not the conclusive factor even in these cases. A right to use one's own body may be operating as the functional equivalent of marital freedom in *Griswold* and the right to receive information in *Stanley*. That is, because the act involves only one's own body, a person may be allowed to act in a way otherwise illegal. (A mother could not, of course, lawfully injure someone else's fetus.)

The abortion cases do offer a potential parallel to possession of marihuana for personal use. The issue becomes whether marihuana use is to be regarded as involving primarily risks to the individual user, and if so, whether the state has a sufficiently compelling interest to prevent the individual from taking such risks.

Courts to date have not extended a "right of privacy" shield to those charged with simple possession of marihuana. But the analytical tools for such a determination are now available in *Griswold* and *Stanley*, as they have been interpreted in the abortion cases.

The state has ample leeway to regulate or to prohibit traffic in those substances it may deem harmful to the public interest, but when that traffic comes to rest, the state's interest comes up against a deeply cherished privilege of private freedom. A defendant charged with possession of marihuana may eventually convince the court that his possession and use, even though possibly detrimental to his health, falls within a protected "zone of privacy" deserving of special consideration.

But the success of such a claim would not resolve the issue; rather it would only answer a threshold question in judicial analysis, for even such a constitutionally protected right may fall before a compelling state interest. See, e.g., *Korematsu v. United States*, 323 U.S. 214 (1944). See, also Note, *Developments in the Law—Equal Protection*, 82 Harv. L. Rev. 1065, 1088-90 (1970).

A recognition of private possession as a fundamental right would, then, only shift the burden of

justification to the state under the compelling state interest doctrine. *McLaughlin v. Florida*, 379 U.S. 184, 196 (1964). The state would still have an opportunity to justify its possession laws, but it might find it more difficult to meet such a burden.

Analysis of the weight of the evidence and the various state interests are beyond the scope of this chapter, but it is enough to suggest that the focus would be on the effect of marihuana use on behavior. And, since much of the concern about marihuana use is speculative and confined to a small minority of users, the government may find it difficult to sustain its burden.

INHERENT LIMITATIONS ON THE POLICE POWER

A second potential challenge to prohibition of private marihuana use relies not on any personal "right," constitutional or otherwise, of the defendant, but rather on a direct challenge to the power of the state to act in the first place.

Traditionally the police power of the state has been limited to activities impinging on the public health, safety, morals, and welfare.¹⁷ Courts considering laws allegedly exceeding such power uniformly look to some public-affecting rationale for such a law as the litmus test of its validity.¹⁸ Any police power challenge would necessarily, then, have to be based on a claim that purely private use of marihuana has no public-affecting repercussion subject to state interference.

Inherent limitations on state police power were tested in a situation parallel to marihuana use in the 1850-1920 period, when state regulation of liquor was first imposed. While initial challenges to the police power were successful on the grounds that private possession of alcohol had insufficient effect on the public weal,¹⁹ eventually the tide turned and courts accepted the legislative determination that private possession of alcohol was closely enough related to the admittedly actionable sale of alcohol to warrant prohibition. See, e.g., *Crane v. Campbell*, 245 U.S. 304 (1917); *Southern Express Co. v. Whittle*, 194 Ala. 406, 69 So. 652 (1915).

The language of these cases allowing state regulation of private possession of alcohol seems to vest virtually total discretion in the legislature to determine the reach of its own power; the only judicially reviewable requirement is the traditional

¹⁵ See, e.g., *Doe, supra*, n.14; *People v. Belous, supra*, note 14; *Roe v. Wade*, 314 F. Supp. 1217 (N.D. Texas 1970), *prob. jurisdiction postponed until hearing on the merits*, 402 U.S. (1971); *United States v. Vuitch*, 305 F. Supp. 1032, 1034-35 (D.D.C. 1969) (dictum), *rev'd on other grounds*, 402 U.S. 62 (1971).

¹⁶ See, e.g., *Steinberg, supra*, n.14. Those supporting the mother's right to abort have, of course, had to find that there was no sufficiently compelling state interest in the birth of fetus (or judicially recognized interest of the fetus itself) to warrant overriding the mother's interest.

¹⁷ *West Coast Hotel Co. v. Parrish*, 300 U.S. 379, 391 (1937); *New Orleans Gas Co. v. Louisiana Light Co.*, 115 U.S. 650, 661 (1885).

¹⁸ *Pierce v. Society of Sisters*, 268 U.S. 510, 534-35 (1925); *Meyer v. Nebraska*, 262 U.S. 390, 402-03 (1923).

¹⁹ *Ex parte Wilson*, 6 Okla. Crim. 451, 119 P. 596 (1911); *Commonwealth v. Campbell*, 133 Ky. 50, 117 S.W. 383 (1909); *State v. Gilman*, 33 W.Va. 146, 10 S.E. 283 (1889).

one, that there be some conceivably rational link between the prohibited act and the public welfare.

Reflecting this view are a number of recent cases upholding laws requiring motorcyclists to wear helmets.²⁰ In each of these cases the court was persuaded to uphold the act not because of any alleged harm to the cyclist, but rather because of the potential public effect—harm to other drivers from a cyclist's loss of control if he were hit by a flying object while riding bare-headed. In *People v. Bielmeyer*, 54 Misc. 2d 466, 282 N.Y.S. 2d 797, 800 (1967), for example, the judge was moved to comment:

The old joke about the happy motorcyclist—"the one with the bugs in his teeth"—is not too funny when one hears or reads about instances where cyclists have been hit with hard-shelled beetles or bees and have lost control of their bikes, causing damage and injuries to others.

Cyclists generally keep to the right of the road where stones and gravel are found which could be propelled by the delicately balanced wheels into the head of the cyclist or passenger, causing distraction and loss of control.

In such cases the courts have deferred to presumed legislative "findings" regarding a public consequence of apparently private acts.²¹ By the very act of rationalizing the legislative decision, however, they have also accepted the doctrine that there is such a thing as an inherent police power limitation.²²

²⁰ See, e.g., *State v. Craig*, 19 Ohio App. 2d 29, 249 N.E. 2d 75 (1969); *State v. Fetterley*, 254 Ore. 47, 457 P. 2d 996 (1969); *State v. Lombardi*, 241 Cal. 2d 625 (1968); *People v. Newhouse*, 55 Misc. 2d 1064, 287 N.Y.S. 2d 713 (1968); *State v. Mele*, 103 N.J. Super. 353, 247 A. 2d 176 (1968); *People v. Bielmeyer*, 54 Misc. 2d 466, 282 N.Y.S. 2d 797 (1967); *People v. Schmidt*, 54 Misc. 2d 702, 283 N.Y.S. 2d 290 (1967).

²¹ In *American Motorcycle Ass'n v. Davids*, 11 Mich. App. 351, 158 N.W. 2d 72 (1968), *Everhardt v. City of New Orleans*, 208 So.2d 423 (La. App. 1968), *rev'd*, 217 So.2d 400 (1969), *appeal dismissed*, 395 U.S. 212 (1969), and *People v. Carmichael*, 53 Misc. 2d 584, 279 N.Y.S.2d 272 (1967), *rev'd*, 56 Misc.2d 388, 288 N.Y.S.2d 931 (1968), the courts rejected the state's rationale for interference and voided the helmet laws as beyond the police power.

²² Illustrative of how courts can validate helmet laws without approving an unlimited police power theory is *State v. Mele*, 103 N.J. Super. 353, 247 A.2d 176 (1968), where the court upheld the helmet law because:

"The general public has a right to be protected from the accidents which might result from a blow on the head received from objects kicked up from the highway. The blow, however slight, might be just enough to distract a motorcyclist and cause him to lose control and become a menace to other vehicles or pedestrians on the highway." 247 A. 2d at 178.

The *Mele* court then went on to distinguish an automobile driver's freedom not to use a seat belt from its helmet decision, pointing out that:

"This situation is clearly distinguishable; since the refusal to wear a seat belt will not cause a driver to become a menace to other users of the highways, it clearly is directed only at the individual and not at the general public." *Id.*

In addition to the motorcycle helmet cases, a number of the recent decisions striking down prohibition of abortions are relevant. Although phrased in terms of a woman's right to privacy, these opinions essentially identify limits on the police power. The private context of an abortion, after all, is irrelevant, whereas in *Griswold* and *Stanley* the context was crucial. A mother's "right" to an abortion has nothing to do with where or how she so acts; if it is allowable at all, it must be because the state has no power to interfere because it has no public claim to enforce.²³

Similarly courts have on occasion refused to allow the state to compel individuals to undergo medical treatment, holding that such a decision is a purely private determination in which the state has no legitimate interest.²⁴ Where courts have interfered in such cases, they have usually been careful to find some public repercussion of the act in question as the rationale for invoking state power.²⁵

Courts continue to look for a public-affecting impact of conduct where the prohibition of that conduct is challenged as beyond the state's police power. The question remains, however, as to who must bear what burden in convincing the court that there is such a rational connection between the challenged law and the public weal. It is the scope of the judicial role in drawing the public and private line that remains undefined.

In general, courts have been satisfied with a conceivably rational relationship to establish a legislature's power to act.²⁶

But a different level of inquiry may be appropriate when the challenge is not to the policy-determining function of the legislature in general, but only to this function insofar as it affects *prima facie* private acts. The very existence of a judicially imposed police power limitation suggests that courts must undertake some measure of

²³ This assumes, of course, a finding that the fetus has no sufficient claim on the state to warrant interference.

²⁴ See *In re Estate of Bernice Brooks*, 32 Ill. 2d 361, 206 N.E. 2d 435 (1965) (upholding patient's opposition to transfusions for peptic ulcer treatment); *In re Seiferth*, 309 N.Y. 80, 127 N.E. 2d 820 (1955) (upholding objections by father and 14-year-old son to operation to correct son's speech defect).

²⁵ In *Application of the President and Directors of Georgetown College*, 331 F.2d 1000 (D.C. Cir.), *cert. denied*, 377 U.S. 978 (1964), for instance, the patient would have died, leaving a seven-month old baby; and in *Raleigh Fitkin-Paul Morgan Memorial Hospital v. Anderson*, 42 N.J. 421, 201 A.2d 537, *cert. denied*, 377 U.S. 985 (1964) the recalcitrant patient was pregnant.

²⁶ See, e.g., *Williamson v. Lee Optical, Inc.*, 348 U.S. 483 (1955); *Railway Express Agency v. New York*, 336 U.S. 106 (1949); *United States v. Carolene Products Co.*, 304 U.S. 144 (1938).

review. Where a challenger establishes a *prima facie* case that the legislature has intruded into a domain of only private concern, not public interest, what are the various standards of review available to the court?

One option implicitly adopted by those courts upholding motorcycle helmet laws has been simply to extend the court's normal deference to the legislature to include *prima facie* private acts. In these cases, the state presented the court with a conceivably rational, though unproved, foundation for a legislative judgment—that lack of a helmet causes accidents because a cyclist may lose control if he is struck by a flying object. The courts accepted this as a sufficient basis for finding that the legislation was enacted to protect the public safety. This approach has the virtue of judicial self-restraint; it also has the drawback of ceding virtually all interpretation regarding the scope of the police power to the legislatures themselves.

If a court will not go beyond seeking some conceivably rational *theory* for State interference, the legislature is essentially free to act as it chooses even where arguably nonpublic acts are affected.

A slightly more rigorous standard of review, which would still seek to maintain deference toward legislative freedom to act within broad bounds, would require the state to offer *some* valid empirical evidence of public harm from a *prima facie* private act before regulating it.

The initial burden of going forward would, of course, still lie with the challenger, who would have to make a *prima facie* case for his claim that his act was purely private, and thus beyond the state's police power to regulate. The court would then turn to the state for a presentation that showed how state regulation affected the public interest. The state's evidence need not be enough to convince the court *de novo*, but merely enough to prove that reasonable men could have found sufficient public interest at stake to warrant state involvement.

Such a standard would shift only a minimal burden to the state, and only then in a few cases. It would, however, serve to put the legislature on notice that some empirical foundation, and not just hypotheses, must support its activities.

In other words, where *prima facie* private conduct is controlled, the legislature ought not be allowed simply to guess; it ought to have some basis for acting. Such a burden on the state is really quite minimal. It might be enough, however, to invalidate marihuana possession laws, since the legislature might have some difficulty showing that experimental or intermittent use of marihuana has any adverse public consequences.

Courts could go further along the continuum of proof. A judge might require the state to prove that its challenged law "more likely than not" bears on a public matter, or that "clear and convincing proof" of public involvement be shown before the state can impose its will on a *prima facie* private actor.

Either test could be imposed by the same kind of reasoning which requires stricter than usual justifications for state classifications affecting fundamental rights when these are challenged on equal protection grounds. Conceivably the courts could even require a necessary relationship between the private conduct and the public weal which no other less restrictive control would avoid.

Current case law does not adequately deal with the proper standard of judicial review in police power cases. At best a standard might be implied in the results reached. Indeed, a judicial choice of who should carry the burden of proof always is a matter of policy; it must be premised on commonly accepted notions of judicial politics and philosophy, and these may differ according to time and place.

For this very reason, the police power framework is a potential vehicle for invalidation of the criminal prohibitions of possession of marihuana for personal use. No firm prediction can be made as to the development of this doctrine. The state of the law is too ambiguous. However, a court with an inclination to do so could shift the burden of proof to the state and this might result in invalidation of the possession proscription.

FREEDOM OF RELIGION

A third recent challenge to marihuana use laws has been leveled under the aegis of the First Amendment's protection of freedom of religion.

Unlike right to privacy claimants or those attacking the legitimacy of police power, defendants claiming a religious cloak for marihuana use can point to an explicit constitutional safeguard to buttress their claim. They have nonetheless fared no better than other defendants in these cases. *See, e.g., United States v. Spears*, 443 F. 2d 895 (5th Cir. 1971) (no religious exemption for Black Muslims); *Leary v. United States*, 383 F. 2d 851 (5th Cir. 1967), *rev'd on other grounds*, 395 U.S. 6 (1969); *Lewellyn v. Oklahoma*, 489 P. 2d 511 (1971).

Still, the possibility of a successful religious challenge to marihuana use laws is real. In California the State Supreme Court has upheld the sacramental use of peyote (a hallucinogen derived from the cactus) by members of the Native Ameri-

can Church. *People v. Woody*, 61 Cal. 2d 716, 394 P. 2d 813, 40 Cal. Rptr. 69 (1964).

Cases dealing with religious freedom in other contexts have isolated three distinct foci of inquiry when a law is challenged as violative of the "free exercise" clause: (1) Is the claimant's belief and practice really a "religion" within the meaning of the First Amendment? (2) If so, is the practice prohibited by the challenged statute *essential* to the practice of the "religion?" (3) Even if the answers to (1) and (2) are yes, is there nevertheless a sufficiently compelling state interest to warrant overriding the practice? Only when the proscribed activity is essential to a qualified "religion" and the state's interest is not overwhelming will the courts invoke the First Amendment to invalidate an otherwise permissible legislative proscription.

Courts are hesitant to investigate the legitimacy of a religion, since the investigation itself smacks of state involvement prohibited by the "establishment" clause of the First Amendment.

Nevertheless, the court sometimes must review a religious claim for sincerity, and in so doing pass on whether the religion whose tenets are professed is *bona fide*. See, e.g., *United States v. Kuch*, 288 F. Supp. 439 (D.D.C. 1968), where the defendants claimed a religious exemption as members of the Neo-American Church. The court reviewed the "goofy nonsense, contradictions and irreverent expressions" of its official catechism and handbook, and concluded that the "church" was a sham created to shield its adherents from prosecution under the drug laws.

On the other hand, where Congress included a religious exemption for conscientious objectors in the Selective Service Act, the Supreme Court read the statutory religious exemption as encompassing any "sincere and meaningful belief which occupies in the life of its possessor a place parallel to that filled by the God of those admittedly qualifying for the exemption. . . ." *United States v. Seeger*, 380 U.S. 163, 176 (1965). See *Welsh v. United States*, 398 U.S. 333 (1970).

It is hard to imagine that the Court would be more circumspect in interpreting the Constitution than it would a statute. Certainly, then, a "religion" for First Amendment purposes would not be limited to the traditional sects. Rather the key would seem to be the sincerity with which the claim was made, and the nature of the religious impulse.

It seems likely, especially on the basis of *Welsh* and *Seeger* that any group sincerely responding to a primary moral imperative, even a non-deistic one, from which a code of belief and practice

flowed, would find itself within the First Amendment's meaning of "religion."

Assuming that a group qualifies as a *bona fide* religion, courts will then inquire into whether the use of marihuana is essential to its practice.

The Supreme Court early in our history made it clear that, while religious beliefs were inviolate, religious practices are subject to restrained government control. *Reynolds v. United States*, 98 U.S. 145 (1878) (State can prohibit polygamy among Mormons).

But the Court has also made it clear that where the religious practice is central to the faith, such control must be very limited in scope. In *Sherbert v. Verner*, 374 U.S. 398 (1963), appellant, a member of the Seventh Day Adventist Church, was discharged by her employer for refusing to work on Saturdays after the employer changed its work week from five to six days for all three shifts. Appellant's refusal was in accordance with the tenets of her faith. She was unable to find suitable five-day work in the area but was denied unemployment compensation benefits under the South Carolina Unemployment Compensation Act on the grounds that she had not made herself "available for work" in accordance with the requirements of the statute.

The Court held first that refraining from working on Saturdays was a necessary element of the claimant's religious practice. It then held that

to condition the availability of benefits upon this appellant's willingness to violate a cardinal principle of her religious faith effectively penalizes the free exercise of her constitutional liberties, 374 U.S. at 406.

The Supreme Court has not yet reached the question of just how essential a religious practice must be to gain First Amendment protection. Two other distinguished courts have considered the question, however. While, on the facts of each case, the courts reached different results, they did agree on the legal test to be applied.

In *People v. Woody*, 61 Cal. 2d 716, 394 P. 2d 813, 40 Cal. Rptr. 69 (1964), the California Supreme Court, per Judge Tobriner, reversed the convictions of Indian members of the Native American Church for using peyote, a hallucinogen derived from the cactus. The Court recognized that religious *acts* are open to some statutory control, but read *Sherbert v. Verner*, *supra*, as a warning to tread most cautiously. The Court examined the ceremonial use of peyote as the focus of the Native American religion among the Indians, and concluded that it was the *sine qua non* of the sect, without which no service could proceed.

Under these circumstances, the Court felt constrained to protect the practice unless some very

compelling state interest intervened. The court considered the state's claims of peyote's harmful effects on the defendant-users as well as its claims that allowing a religious exemption would hamper normal enforcement efforts, but it found neither of these interests sufficient to outweigh the right of the defendants to practice their religion.

In *Leary v. United States*, 383 F. 2d 851, 857-58 (5th Cir. 1967), *rev'd on other grounds*, 395 U.S. 6 (1969), the Fifth Circuit was presented with a religious claim to the use of marihuana itself. Dr. Leary, an advocate of the use of hallucinogens and other drugs, was arrested for illegally importing and possessing marihuana. One of his defenses was a First Amendment freedom of religion claim that marihuana was an aid to the meditation and self-contemplation essential to his Hindu-like religious orientation.

The Fifth Circuit, like the California Supreme Court, noted the distinction to be made between religious belief and action, but placed greater emphasis on the state's power to regulate the latter in the public interest. It examined Dr. Leary's claim on its merits and found that his use of marihuana was not absolutely essential to the contemplative faith he professed, but rather that marihuana was but one of several ways by which he stimulated meditation. The Court distinguished *Woody* on this ground and went on to find that the state had shown a sufficiently rational interest to warrant regulation in this case despite Dr. Leary's religious claim.

The net finding of *Leary* and *Woody* is that a religious activity must be absolutely crucial to the practice of the faith to warrant strong First Amendment protection. In essence, use of any otherwise prohibited substance must amount to a sacrament, akin to the wafer and wine of Catholicism, before it will weigh heavily in the constitutional balance. Also, if the substance is but one of a variety of aids to the faith, it may be banned.

To date no religion has met this judicial test of essentiality for the use of marihuana in its ceremonies. It is unlikely, although not inconceivable, that it ever will.

It is possible that a religion preaching introspective contemplation as a way to commune with a higher divinity—using marihuana as a fundamental sacrament—might evolve. If such a religion should present its claim and pass muster under the two tests of legitimacy and essentiality—an unlikely outcome—the courts would then have to resolve the factual dispute over the alleged social evils of marihuana use. No longer, however, could the State claim a strong presumption favor-

ing its legislative determination. As the Supreme Court said in *Sherbert*:

It is basic that no showing merely of a rational relationship to some colorable state interest would suffice; in this highly sensitive constitutional area '[o]nly the gravest abuses, endangering paramount interests, give occasion for permissible limitation . . . ' 374 U.S. at 406.

And see *Board of Ed. v. Barnette*, 319 U.S. 624 (1943) (no compelling interest in forcing Jehovah's Witness children to salute flag); *State v. Yoder*, 49 Wisc.2d 430, 182 N.W.2d 539 (1971), *cert. granted*, 402 U.S. 994 (1971) (insufficient state interest in education to compel Amish school children to continue beyond eighth grade in violation of religious tenet); *Valent v. New Jersey St. Bd. of Ed.*, 114 N.J. Supp. 63, 224 A. 2d 832 (1971) (no compelling interest in forcing attendance at sex education classes); and *People v. Woody, supra* (insufficient compelling interest in preventing peyote use to disturb religious ceremony).

If religious necessity could ever be shown, then the state would have to demonstrate a strong need to prohibit marihuana use. And shifting the onus to the state probably would doom the challenged law, for the scientific evidence would not support the kind of conclusive proof demanded in free exercise cases.

EQUAL PROTECTION OF THE LAWS

Marihuana legislation also raises questions under the equal protection clause of the Fourteenth Amendment.²⁷ Nevertheless, the courts have thus far refused to overturn marihuana laws on equal protection grounds.²⁸

Stated generally, the equal protection clause demands:

[T]hat equal protection and security should be given to all under like circumstances in the enjoyment of their personal and civil rights; that all persons should be equally entitled to pursue their happiness and acquire and enjoy property . . . that no impediment should be imposed to the pursuits of any one except as applied to the same pursuits by others under like circumstances *Barbier v. Connolly*, 113 U.S. 27, 31 (1885).

However, "equal protection does not require that all persons be dealt with identically. . . ." ²⁹ In striking a balance between "equal treatment" and "identical treatment," the Supreme Court has em-

²⁷ The Federal Government is bound to a similar standard via the due process clause of the Fifth Amendment. *Bolling v. Sharpe*, 347 U.S. 497 (1954); *Hobson v. Hansen*, 269 F. Supp. 401, 493 (D.D.C. 1967), *aff'd sub nom.*, *Smuck v. Hobson*, 408 F. 2d 175 (D.C. Cir.), *appeal dismissed*, 398 U.S. 801 (1968).

²⁸ See, e.g., *People v. Sinclair*, 30 Mich. App. 473, 186 N.W. 2d 767, 770 (1971); *Miller v. Texas*, 458 S.W.2d 680, 684-85 (Ct. Crim. App. 1970).

²⁹ *Baxstrom v. Herold*, 383 U.S. 107, 111 (1966).

played the doctrine of reasonable classifications. That doctrine holds that legislative classifications "must always rest upon some difference which bears a reasonable and just relation to the act in respect to which the classification is proposed, and can never be made arbitrarily and without any such basis."³⁰ "The measure of the reasonableness of a classification is the degree of its success in treating similarly those similarly situated."³¹

A classification may fail to meet this test if it is either "over-inclusive" or "under-inclusive."

A classification is "over-inclusive" when it "imposes a burden upon a wider range of individuals than are included in the class of those tainted with the mischief at which the law aims."³²

A classification is "under-inclusive" when

[a]ll who are included in the class are tainted with the mischief, but there are others also tainted whom the classification does not include. Since the classification does not include all who are similarly situated with respect to the purposes of this law, there is a prima facie violation of the equal protection requirement of reasonable classification.³³

For example, the classification which subjected "American citizens of Japanese ancestry" to special curfews during World War II was clearly "over-inclusive" since only some of them were even potential saboteurs. However, the "over-inclusion" was held permissible since the military authorities could not be required to take the time to consider individual cases when faced with the possibility of imminent invasion.³⁴ And the forced relocation of the Japanese away from the West coast was a case of "under-inclusion" since the relocation did not affect Germans or Italians who might equally have been suspected of divided loyalties.³⁵

Marihuana laws have been similarly attacked as "over-inclusive" in that some of them treat similarly both users of marihuana and opiates, and also as "under-inclusive" in that they criminalize possession of marihuana while possession of alcohol is legal.

To understand why such challenges continue to be made even though they have previously been

unsuccessful, it is necessary to examine both the traditional judicial view of the equal protection clause and new innovations in its application.

The Traditional Doctrine

Traditionally, courts have shown extreme deference to the legislature with respect to "regulatory legislation affecting ordinary commercial transactions" and have not "pronounced [it] unconstitutional unless in the light of the facts made known or generally assumed it is of such a character as to preclude the assumption that it rests upon some rational basis within the knowledge and experience of the legislators."³⁶

Given this presumption, and the current state of knowledge with regard to the effects of marihuana, it is hardly surprising that the courts have refused to invalidate marihuana laws on equal protection grounds.

For example, even though almost all medical experts agree that heroin and marihuana are distinctly different drugs both in action and effect, and that heroin is by far the more dangerous of the two, a court could find as recently as 1964 that "the boundary line, if any, between narcotics and marihuana is indistinct and . . . statutes and interpreting courts do not give much emphasis to it."³⁷

If courts are unwilling to upset the very questionable legislative equation of marihuana and heroin, certainly they will not hold marihuana laws unconstitutional because they do not also reach alcohol, at least while there is still a good deal of respectable disagreement as to the relative dangers of the two.

And, even if a court were to find that no rational differentiation could be made on the basis of the inherent dangers of alcohol and marihuana, the legislature's decision to criminalize only marihuana use could be upheld on the theory that there is currently no scientific test for marihuana intoxication, as there is for alcohol.³⁸

Courts have also in the past upheld statutes which were admittedly under-inclusive on the theory that the legislature may deal with general problems on a step-by-step or partial basis where

³⁰ *Gulf, Col. & S. Fe. Ry. v. Ellis*, 165 U.S. 150, 155 (1897). See *F.S. Royster Guano Co. v. Virginia*, 253 U.S. 412, 415 (1920) ("[t]he classification must be reasonable, not arbitrary, and must rest upon some ground of difference having a fair and substantial relation to the object of the legislation, so that all persons similarly circumstanced shall be treated alike").

³¹ *Tussman and tenBroek, The Equal Protection of the Law*, 37 *Calif. L. Rev.* 341, 344 (1949).

³² *Id.* at 351.

³³ *Id.* at 348.

³⁴ *Hirabayashi v. United States*, 320 U.S. 81 (1943).

³⁵ *Korematsu v. United States*, 323 U.S. 214, 243 (1944) (Jackson J. dissenting.)

³⁶ *United States v. Carolene Prods. Co.*, 304 U.S. 144, (1938).

³⁷ *Robinson v. United States*, 327 F. 2d 618, 624 (8th Cir. 1964) (Blackman, J.).

³⁸ *E.g., Commonwealth v. Lels*, 355 Mass. 189, 243 N.E. 2d 898, 903 (1969). This difference is crucially important if marihuana affects activities such as driving automobiles. Absent such a test, it might be argued that the only way to protect the public from a marihuana-intoxicated driver is to attempt to make marihuana unavailable.

it is administratively impractical to approach the problem *in toto*.³⁹

Thus, even if the legislature were to find that other drugs posed a greater hazard to society than marihuana, their criminalization is not necessarily a condition precedent for the criminalization of marihuana.

For example, experience under the 18th Amendment might be an adequate basis for a legislative judgment that the prohibition of alcohol is administratively impossible. And it has been said that under the equal protection clause:

[T]he law does all that is needed when it does all that it can . . . to bring within the lines all similarly situated so far and so fast as its means allow.⁴⁰

While the argument to the contrary has been advanced,⁴¹ a legislator could certainly rationally find that criminalization was a reasonable means to eliminate or discourage marihuana use.

Thus, traditional equal protection arguments will not protect marihuana use whatever its harmfulness relative to other drugs, including heroin and alcohol. As long as a court can envision any rationale for a legislative prohibition of marihuana, it is bound to uphold it. However, in the last several years, another equal protection theory has been emerging, one which has some relevance to the constitutional status of the marihuana laws.

The Special Case for Fundamental Rights

There is little dispute that during the late 1960's equal protection doctrine underwent a dramatic transformation into a tool for protecting "fundamental" interests not specified in the Constitution.⁴²

Under this new view of the equal protection clause, classifications which unequally affect "fundamental" interests must be more than merely rational; they must be justified by a *compelling* governmental interest which no less restrictive classification will serve.

³⁹ See, e.g., *Williamson v. Lee Optical, Inc.* 348 U.S. 483, 488-89 (1955); *West Coast Hotel Co. v. Parrish*, 300 U.S. 379, 400 (1937); *Traux v. Raich*, 239 U.S. 33, 43 (1915).

⁴⁰ *Buck v. Bell*, 274 U.S. 200, 208 (1927) (Holmes, J.). The concept that the legislature need do only what it "can" has, however, been criticized as leaving the door ajar for manifest violations of the equal protection clause which have, as their only justification, political necessity. Tussman and TenBroek, *supra*, Note 31 at 348-51.

⁴¹ Kaplan, *Marijuana, The New Prohibition* (1970).

⁴² Karst and Horowitz, *Reitman v. Mulkey: A Telophase of Substantive Equal Protection*, 1967 Sup. Ct. Rev. 39; Michelman, *Forward: On Protecting the Poor Through the Fourteenth Amendment*, 83 Harv. L. Rev. 7 (1969); Note, *Developments in the Law—Equal Protection*, 82 Harv. L. Rev. 1065 (1969).

This doctrine was foreshadowed in *Skinner v. Oklahoma*, where the Court subjected to "strict scrutiny" an Oklahoma statute providing for compulsory sterilization of "habitual criminals" because it affected "one of the basic civil rights."⁴³ The act exempted from its operation those convicted of "white-collar crimes," "offenses arising out of the violation of the prohibitory laws, revenue acts, embezzlement, or political offenses . . ."⁴⁴ Oklahoma offered no rationale for the differentiation, and the Court held that "[s]terilization of those who have thrice committed grand larceny, with immunity for those who are embezzlers, is a clear, pointed, unmistakable discrimination" and that the state had "made as invidious a discrimination as if it had selected a particular race or nationality for oppressive treatment."⁴⁵

Since *Skinner*, the Court has required a showing of a compelling state interest to justify a classification which resulted in the denial of "food, shelter, and other necessities of life" and touched "on the fundamental right of interstate movement."⁴⁶ The Court also found a denial of equal protection in Louisiana's wrongful death statute insofar as it allowed recovery for a mother's death by legitimate children while denying such recovery by illegitimate children; on the grounds that the state failed to show any compelling interest to justify the distinction.⁴⁷

The effect of the "stricter scrutiny" exercised in these cases on marihuana laws depends on the "reach" of the test. One commentator sympathetic to the "new" equal protection has suggested that a state will be required to show a "compelling" interest only where the classification in question "discriminates" against a disadvantaged group.⁴⁸ And, so far, the classifications which have been overturned under the "compelling state interest" test have in operation primarily affected the poor and racial minorities.

If this is, in truth, the outer limit of the "new" equal protection, then it seems unlikely that the doctrine will have much effect on challenges to the marihuana laws, for it is unlikely, although not inconceivable, that marihuana users would be considered a "disadvantaged group."

⁴³ 316 U.S. 535, 541 (1942).

⁴⁴ *Id.* at 537.

⁴⁵ *Id.* at 541.

⁴⁶ *Shapiro v. Thompson*, 394 U.S. 618, 627, 638 (1969) (invalidating a one-year residence requirement for welfare recipients).

⁴⁷ *Levy v. Louisiana*, 391 U.S. 68 (1968).

⁴⁸ Karst, *Invidious Discrimination: Justice Douglas and the Return of the "Natural-Law-Due-Process Formula"*, 16 U.C.L.A. L. Rev. 716, 739 (1969).

However, it has been suggested that "[o]nce loosed, the idea of Equality is not easily cabined."⁴⁹ If, as a straightforward reading of the language in "new" equal protection cases suggests, all that is necessary to invoke the "compelling state interest" test is that the statute in question affect a "fundamental" personal interest, the doctrine may yet have some effect on equal protection challenges to the marihuana laws.

It is highly unlikely that any court would find that marihuana use is, in and of itself, such a "fundamental" interest. But a court might find that laws directed against mere possession of marihuana for personal use impinge upon an individual's "right to be let alone." Even if this claim alone would not be sufficient to require a showing of a "compelling state interest", were it considered in light of a concurrent claim of a deprivation of equal protection, then it might warrant such a showing.⁵⁰

⁴⁹ Cox, *Forward: Constitutional Adjudication and the Promotion of Human Rights*, 80 Harv. L. Rev. 91 (1966).

⁵⁰ Cf. *Stanley v. Georgia*, 394 U.S. 557 (1969), where the Court considered both First Amendment and "privacy" claims in overturning a criminal conviction while suggesting that neither alone was sufficient to justify reversal.

As this Appendix was going to press, the Supreme Court handed down its decision in *Eisenstadt v. Baird*, 40 U.S.L.W. 4303 (Mar. 22, 1972), overturning appellee's conviction under a Massachusetts law forbidding the distribution of contraceptive (as opposed to prophylactic) devices other than distribution to married persons by a physician or pharmacist. Baird, a layman, had been convicted for distributing samples of contraceptive foam to audiences at a lecture.

Speaking for a four-man majority of a seven-man Court (Justices Powell and Rehnquist not participating), Justice Brennan, after finding that the state's only objective was to prevent conception, held that "the State could not, consistently with the Equal Protection Clause, outlaw distribution to unmarried but not to married persons." U.S.L.W. at 4308. The majority so held without deciding the question of whether the distribution of contraceptives itself was constitutionally protected by the right of privacy delineated in *Griswold*. However, Justice Brennan stated that

"[I]f under *Griswold* the distribution of contraceptives to married persons cannot be prohibited, a ban on distribution to unmarried persons would be equally impermissible. It is true that in *Griswold* the right of privacy in question inhered in the marital relationship. Yet the marital couple is not an independent entity with a mind and heart of its own, but an association of two individuals each with a separate intellectual and emotional make-up. If the right of privacy means anything, it is the right of the individual, married or single, to be free from unwarranted governmental intrusion into matters so fundamentally affecting a person as the decision whether to bear or beget a child." U.S.L.W. at 4308 (citations omitted).

Justices White and Blackmun concurred in the result. They found that since the record contained no evidence as to the marital status of the person to whom appellee Baird

CONCLUSION

Marihuana possession remains illegal throughout the United States despite spirited constitutional challenge, and no judicial upheaval of such laws is likely in the foreseeable future. Questions of drug regulation are still unsettled enough, and the ultimate scope of the constitutional doctrines discussed above still murky enough, to induce judicial deference to legislative judgments. If, however, the scientific evidence on marihuana continues to suggest minimal impact from its use, and if legislators do not respond to this development, courts may yet impose limits on marihuana regulations.

Should courts be moved to act to protect marihuana use, any of the above discussed theories might become an appropriate vehicle. Indeed, the precise theory used might be an amalgam. The critical issue will probably not be the textual source of the constitutional protection but rather the allocation of the burden of proof on the issue of marihuana's effects on human physiology and behavior. If a court casts the burden of proof on the state to support its prohibition with something more than anecdotal evidence, then the use (as opposed to the manufacture or distribution) of marihuana might become constitutionally protected.

distributed the contraceptive foam, the conviction must be assumed to be based on the premise that the recipient was married, and that therefore the only illegal aspect to the action was the fact that Baird was neither a physician or a pharmacist. After concluding that restricting the distribution function to physicians and pharmacists "burden[ed] the constitutional right of married persons to use contraceptives . . ." they concluded that "[d]ue regard of protecting constitutional rights requires that the record contain evidence that . . . the distribution of vaginal foam should be accompanied by medical advice in order to protect the user's health." 40 U.S.L.W. at 4311.

The Chief Justice dissented on the grounds that Massachusetts' requirement that contraceptive foam be dispensed only by physicians and pharmacists had been found by the Massachusetts Supreme Judicial Court to serve "the legitimate interest of the State in protecting the health of its citizens." The Chief Justice would have deferred to the legislative finding and in particular took exception to Justices White's and Blackmun's view that the State must make some showing on the record of the dangerousness of the material to be regulated.

While time does not permit a detailed analysis of this chapter in light of *Baird*, the following points are of particular interest:

- (1) None of the Justices indicated any retreat from *Griswold*;
- (2) Four of the Justices suggested that the protection in *Griswold* was not confined to the marital relationship; and
- (3) Two Justices concluded that where a constitutional right is burdened, the record must contain at least some evidence supporting the rationale of the State's justification.

Federal Preemption of Marihuana Control

If Congress determines that nationwide marihuana prohibition is unsound public policy, it can simply repeal the federal laws against marihuana-related activities.

Similarly, if it concludes that, while marihuana prohibition should be continued, criminal penalties for certain activities such as possession for personal use are too severe, Congress could readily reduce or eliminate all federal penalties for such conduct.

But while Congress can liberalize its own marihuana policy, the mere repeal or amendment of federal laws would leave intact strict prohibitions and penalties on marihuana-related activities presently embodied in the laws of the several states. Accordingly, Congress might wish to impose its liberalized policy on the states.

This possibility raises constitutional questions as to the power of Congress to preempt state laws concerning marihuana, either by forbidding particular kinds of state regulations as inconsistent with its own or by preempting the entire field of marihuana regulation and thus excluding state regulation altogether.

These questions will be examined in the context of two alternative congressional approaches: first, general legalization, subject to regulation, of the supply, distribution and use of marihuana; second, partial relaxation of federal prohibitions involving a withdrawal of criminal penalties for activities incident to possession for personal use.

A further question is whether, if Congress were to assume exclusive responsibility for all or some aspects of marihuana regulation, it could then require state courts to enforce the federal laws in order to avoid an increased burden on the federal courts.

PRECLUDING STATE CONTROL UNDER THE COMMERCE POWER

Under Article VI of the Constitution, federal law is supreme over state law, and state laws in conflict with valid federal laws cannot stand.

Accordingly, when Congress expressly precludes state regulation of an activity, thus creating a direct conflict with any state law of the kind forbidden, the only question is whether the federal law that creates the conflict is a valid exercise of the powers delegated to Congress under Article I, Section 8.

If Congress seeks to impose liberalized marihuana policies on the states, it is most likely to rely on the power to regulate interstate and for-

eign commerce. Present federal regulation of many psychoactive drugs, including the federal prohibition of possession of marihuana, is predicated on that power.⁵¹

In this century, the commerce clause has served as the principal congressional vehicle for regulating not only interstate commerce itself, but diverse intrastate activities in some way related to interstate commerce, including labor relations,⁵² wages and hours,⁵³ agriculture,⁵⁴ racial discrimination in restaurants,⁵⁵ and loan-sharking.⁵⁶

In spite of the increasing reliance on the commerce clause, the Supreme Court has not, since 1937, held that Congress has exceeded its powers under that clause.

The power to regulate interstate commerce itself, including the instrumentalities by which it is carried out, is essentially a federal power. If there is a clear need for national uniformity, state regulation is precluded by the constitutional delegation of power itself, even if Congress has not legislated in the field. Where the states are not ousted *ab initio*, they may regulate interstate commerce only at the sufferance of Congress. Otherwise, permissible state regulation of a particular field of interstate commerce is preempted by any federal regulation which evidences even an unspoken congressional intent to occupy the field.⁵⁷ Thus, it is clear that Congress may exclude the states altogether from regulating interstate sales or shipments.

On the other hand, activities such as use or possession within the boundaries of a single state and cultivation or intrastate sales of locally-grown marihuana, are, in principle, subject to regulation by the states under their police power, so long as their regulation does not impose too great a burden on the flow of interstate commerce.

Congressional authority over these intrastate activities under the commerce clause extends only to such regulation as is "necessary and proper" to the execution of the power to regulate or protect interstate commerce. See Article I, Section 8 of the Constitution. And valid federal regulations do not deprive the states of their inherent police power jurisdiction except to the extent that the federal mandates conflict with particular state regulations. If Congress expressly precludes state regu-

⁵¹ See Comprehensive Drug Abuse Prevention and Control Act of 1970, 84 Stat. 1424.

⁵² See *National Labor Relations Board v. Jones & Laughlin Steel Corp.*, 301 U.S. 1 (1937).

⁵³ See *United States v. Darby*, 312 U.S. 100 (1941).

⁵⁴ See *Wickard v. Filburn*, 317 U.S. 111 (1942).

⁵⁵ See *Katzbach v. McClung*, 379 U.S. 294 (1964).

⁵⁶ See *United States v. Perez*, 402 U.S. 146 (1971).

⁵⁷ See, e.g., *Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218 (1947); *Hines v. Davidowitz*, 312 U.S. 52 (1941).

lation, thus creating a conflict between state and federal law, the question is whether excluding the states under the circumstances is an appropriate means of implementing the commerce power.

In general, the burden of justifying regulation outside the channels of interstate commerce as necessary and proper under the commerce clause is not an onerous one.

The cases decided by the Supreme Court establish a two-fold test for determining whether such regulation is constitutional. First, there must be a "rational basis" for concluding that the regulated activities have a substantial effect on or relation to (a) interstate commerce itself or (b) congressional regulation of interstate commerce. Second, the intrastate regulation must be a reasonably appropriate means of protecting interstate commerce or enforcing the regulation thereof.⁵⁸

All that is required under the first test is a showing that the regulated class of activities as a whole has the necessary connection with interstate commerce; no effect or relation need be attributed to any particular instance or transaction standing alone.⁵⁹

In applying the test of reasonable appropriateness of the regulation, the courts do not inquire into purposes unrelated to interstate commerce which Congress may also have had in mind in enacting its regulation.⁶⁰

In applying both tests, the courts are extremely deferential to determinations made by Congress as to the breadth of its power.⁶¹

Regulation

If the federal policy became one of removing prohibitions on all ordinary marihuana-related activities, including interstate sales and shipments, it is reasonably clear that Congress could require the states to abandon the field.

In the first place, there is no doubt that Congress could forbid any direct state interference with the purchase and importation of marihuana in interstate transactions.

It seems clear as well that outright state prohibitions on cultivation, use, or possession, while not regulations of interstate commerce as such, could be precluded on the ground that they would tend to inhibit the legalized flow of marihuana in interstate commerce.

⁵⁸ *Heart of Atlanta Motel, Inc. v. United States*, 379 U.S. 241 (1964); *United States v. Wrightwood Dairy Co.*, 315 U.S. 110, 119-21 (1942).

⁵⁹ *Wickard v. Filburn*, 317 U.S. 111 (1942).

⁶⁰ *Katzenbach v. McClung*, 379 U.S. 294 (1964); *United States v. Darby*, 312 U.S. 100 (1941).

⁶¹ *Katzenbach v. McClung*, *supra*; *United States v. Perez*, 402 U.S. 146 (1971).

The question remains whether Congress could go further and forbid any state regulatory controls on permitted marihuana-related activities.

In the unlikely event that Congress determines there should be no regulation whatever of such matters as where, to whom, by whom, in what amounts or strengths, under what labels and in what packages marihuana may be sold, it could reasonably forbid all state regulations thereof as obstacles in the path of interstate commerce.

In the more likely event that Congress decides itself to take responsibility for regulating such matters, the critical question would be whether there is an adequate commerce power rationale to justify federal control over all the activities from which state regulation is to be barred. For if Congress does have the power to determine the conditions under which such activities may be conducted, it can preempt the field on the theory that any state regulation of the same activities would be either inconsistent or superfluous.

With respect to the question of congressional power to supervise marihuana-related activities, the only area of substantial doubt involves the application of federal regulations to intrastate activities involving homegrown marihuana.

(1) It is clear, for example, that the power to regulate interstate commerce itself embraces all aspects of interstate marihuana transactions, including the cultivation of the marihuana, for interstate sale, the potency of the packaged product, the contents of the labels, the identity of the sellers, and the eligibility of purchasers.

(2) It appears, in addition, that federal regulation of all these matters can extend to intrastate transactions involving marihuana that has previously moved in interstate commerce.⁶²

In *McDermott v. Wisconsin*, 228 U.S. 115 (1913), the Supreme Court held that Congress could require intrastate sellers to retain the labels which federal law required for goods shipped in interstate commerce where the goods remained in their original containers (although not in the original package in which they were shipped).

The Court therefore invalidated, as in conflict with a valid federal regulation, a state law requiring labels on products sold within the state different from those required under the federal law. The Court said enforcement of the state law would "discredit and burden legitimate Federal regulations of interstate commerce . . . and . . . im-

⁶² It has long been clear that in some circumstances Congress may continue to regulate articles transported in interstate commerce after their interstate movement has ended. *E.g.*, *Hipolite Egg Co. v. United States*, 220 U.S. 45 (1911).

pair the effect of a Federal law. . . ." 228 U.S. at 133-34.

The state law had burdened legitimate federal regulation in *McDermott* because it interfered with federal inspection of the goods after arrival, which was the first practical opportunity to determine whether they had been properly labeled during interstate shipment.

In *United States v. Sullivan*, 332 U.S. 689 (1948) the Court extended *McDermott* by requiring federally prescribed labels on drugs repackaged intrastate after interstate shipment and held for resale to the public.⁶³ In deciding the commerce clause question, the *Sullivan* court ostensibly relied on *McDermott*, stating:

[I]n both cases alike the question relates to the constitutional power of Congress under the commerce clause to regulate the branding of articles that have completed an interstate shipment and are being held for future sales in purely local or intrastate commerce. The reasons given for the *McDermott* holding therefore are equally accurate and persuasive here. 332 U.S. at 698.

Since the facts in *Sullivan* do not fit the *McDermott* "inspection" rationale, the Court in *Sullivan* presumably read *McDermott* as standing for a broader proposition.

Both *McDermott* and *Sullivan* emphasized that the Congressional purpose for the federal labeling requirement was to prevent "misbranded" drugs from being sold to the ultimate consumer. It is difficult to extract any principle from *Sullivan* other than that once goods have moved in interstate commerce, Congress may regulate their intrastate resale to enforce the ultimate non-commercial objective of its regulation of interstate commerce in the goods.

Effective enforcement of the regulations of interstate marihuana traffic could justify federal regulation of the *consumption* as well as the intrastate *sale* of marihuana which had once moved in interstate commerce.

While these cases involve regulations of labeling, they would seem to be equally applicable to regulations of other aspects of marihuana transactions occurring after the marihuana has passed out of interstate commerce.

In the recent case of *United States v. Bass*, 404 U.S. 336 (1971), for example, the Supreme Court construed a federal statute regulating possession,

⁶³ The drugs in *Sullivan* were originally shipped from Illinois to a Georgia consignee in properly labeled 1,000 tablet bottles. Respondent purchased one of those bottles for his Columbus, Georgia drug store. He repackaged the drugs in boxes of 12 tablets each but did not affix the required federal labels to the boxes. The first 12 tablet box was sold nine months after the drugs had last moved in interstate commerce.

receipt or transportation in interstate commerce of firearms by convicted felons to apply to receipt of any firearm that had been "previously transported" in interstate commerce. The Court evidently concluded that this reading would not raise any substantial constitutional issue.⁶⁴

(3) It is also probable that a federal regulation forbidding mere possession or consumption of marihuana which has been sold in interstate commerce in violation of federal regulations controlling the interstate traffic could be sufficiently justified under the commerce clause as a means of enforcing those regulations.

(4) There remains the question of regulation of intrastate activities involving marihuana grown for and remaining in intrastate commerce. The impact of the cultivation, sale, or use of such home-grown marihuana on interstate commerce or on congressional regulations of interstate commerce is less direct, but not different in kind, than the impact of the cultivation, sale, or use of interstate marihuana.

The courts have shown a willingness to allow such wholly intrastate acts to be swept under the federal regulatory umbrella, if the "typical" instance of the overall activity regulated involves an interstate transaction.⁶⁵

For one thing, home-grown marihuana not complying with federal standards may compete with interstate marihuana and thus diminish the flow of lawful interstate commerce. There is authority that Congress may preclude such competition as a burden on interstate commerce.⁶⁶

Moreover, since marihuana is fungible, the origin of any particular marihuana is usually impossible to determine.

Accordingly, the effectiveness of federal regulations governing interstate commerce in marihuana will be impaired to some extent by any inconsistent state regulatory policy toward marihuana that does not move in interstate commerce. This is particularly true if quality and potency control, as well as limitations on consumption, are intrinsic to the federal regulatory scheme.

⁶⁴ Justice Blackman and the Chief Justice would have construed the statute to reach possession on receipt of any firearm whatever. For them the constitutional question was evidently resolved by a Congressional finding (in the preamble of the statute) that possession of firearms by convicted felons constituted a "burden on commerce or threat affecting the free flow of commerce . . ." 404 U.S. at 353 n.3 (quoting 18 U.S.C. § 1201).

⁶⁵ E.g., *United States v. Perez*, 402 U.S. 146 (1971) (Federal punishment of extortion in connection with repayment of loans wherever occurring).

⁶⁶ *United States v. Wrightwood Dairy Co.*, 315 U.S. 110 (1942).

Congress relied in part on such a rationale in its 1965 amendments to the Food and Drug Act section 2, P.L. 89-74, 79 Stat. 226 (1965) regulating the sale and possession, except for specified purposes, of drugs such as LSD, amphetamines and barbiturates, whether or not the drugs had ever moved in interstate commerce.

All four U.S. Courts of Appeals which considered the constitutionality of these amendments upheld them as a valid exercise of the commerce power. All cited the need for effective enforcement of the regulations concerning interstate traffic as a justification for extending the federal regulation to wholly intrastate activities.⁶⁷

In sum, after making appropriate findings of fact, Congress probably would have power under the commerce clause to regulate all marihuana-related activities, if it has once determined that traffic in marihuana should no longer be prohibited. Having the power to regulate all such activities, it could probably prohibit the states from regulating them at the same time.

Partial Prohibition

If Congress decided to withdraw only the penalties for certain marihuana-related activities (e.g. possession for personal use), without removing those for sales and shipments in interstate commerce, it would have much greater difficulty in imposing its policy on the states under the commerce clause.

State laws penalizing possession for personal use would doubtless still inhibit the movement of marihuana in interstate commerce, but the inhibitions would be entirely consistent with the federal policy seeking to prohibit such commerce altogether.

Under these circumstances, Congress could not reasonably conclude that it must invalidate the state prohibitions in order to protect interstate

commerce in marihuana, even under the loose standards of reasonableness that have been applied to exercises of the commerce power.

There is a possibility that preemption of state laws prohibiting possession for personal use could be justified as a reasonable means of enforcing the federal ban on interstate transactions. It might be argued that penalties upon possession make it more difficult for federal officials to police the black market, since the state prohibitions would implicate large numbers of otherwise law-abiding persons in the criminal activity and its concealment where they might otherwise assist or at least not resist federal enforcement efforts.

Alternatively it could be argued that removing penalties from the personal possession of marihuana might increase the effectiveness of federal bans on interstate commerce in more dangerous drugs by reducing the size of the market for them by limiting the access of pushers of such drugs to marihuana purchasers.

However, these arguments would probably be deemed too fanciful by the courts to justify preempting state regulation under the commerce power; indeed, they would most likely be considered too remote by Congress itself.

The remaining possibility is that Congress might be able to circumvent any insufficiency of grounds for preempting state prohibitions of possession as such by prohibiting state regulations of all marihuana-related activities in general.

The theory behind such a blanket preemption would have to be that the marihuana problem is a seamless web requiring a uniform national regulatory policy, regardless of what the content of that policy might be.

There has always been a view that the commerce clause is adequate authority for any necessary federal action addressed to problems which have outgrown effective state regulation,⁶⁸ particularly when the overall problem is predominantly of commercial origin, or where the problem has identifiable effects on the national economy.⁶⁹

But the theory that uniform regulation of activities such as private possession is necessary to an overall solution of the marihuana problem would put the justification of federal regulation of intrastate activities on a level of abstraction and generality that has not yet been found acceptable by the Supreme Court. It is possible, however, that the modern decided cases, all upholding exercises of the commerce power, do not mark the outer limits of that power.

⁶⁷ See *Gibbons v. Ogden*, 22 U.S. (9 Wheat) 1 (1824).

⁶⁸ See *United States v. Perez*, 426 F.2d 1073 (2d Cir. 1970), *aff'd*, *United States v. Perez*, *supra*.

⁶⁹ *United States v. Cerrito*, 413 F. 2d 1270 (7th Cir. 1969), *cert. denied*, 396 U.S. 1004 (1970); *Russell White v. United States*, 399 F. 2d 813 (8th Cir. 1968); *Deyo v. United States*, 396 F. 2d 595 (9th Cir. 1968); *Lawrence White v. United States*, 395 F. 2d 5 (1st Cir. 1968), *cert. denied*, 393 U.S. 928 (1968). The Court in the *Deyo* case expressed some doubt as to whether the difficulty of identifying the origin of most drugs would be sufficient by itself to justify regulation of all intrastate activities involving such drugs. It nonetheless relied on a similar enforcement theory in upholding the statute, saying that intrastate transactions may be regulated where they have become "so commingled with . . . interstate transactions" that "regulations of both types of commerce is required if there is to be effective regulation of either," and "the effective government of the former incidentally controls the latter." 396 F. 2d at 597-98.

PRECLUDING STATE CONTROL UNDER § 5 OF THE 14th AMENDMENT

The 14th Amendment could perhaps provide an alternative to the commerce clause as a basis for congressional preemption of the control of marihuana.

A theory based on the 14th Amendment could be constructed as follows: The 14th Amendment, in Section 1, forbids any state to "deprive any person of life, liberty, and property without due process of law." Section 5 of the Amendment gives Congress the power "to enforce, by appropriate legislation, the provisions of [Section 1]." Arguably, state prohibitions of private use and possession of marihuana violate the 14th Amendment's guarantee of due process, in that they invade an individual's right of privacy. (See the discussion earlier in this chapter, pages 1124 to 1127).

Therefore, it is arguable that Congress could, pursuant to its Section 5 "enforcement" powers, prevent the states from prohibiting use and possession of marihuana in order to protect that right of privacy.⁷⁰

Such a theory would, however, be a speculative one and would probably not be sufficient, by itself, to support federal preemption of marihuana control, even in this limited sense.

Specifically, the theory has two major limitations. First, the Supreme Court has not yet addressed itself to Congress' power to enforce due process rights. To date, the limitations on state action by the due process clause of the 14th Amendment have all been imposed by court decision, not by Congress. The parameters of Congressional power are therefore untested. Furthermore, in at least one analogous case concerning Congressional use of Section 5 enforcement powers to legislate under the 14th Amendment's equal protection clause,⁷¹ the Court narrowed rather than widened Congress' power.

The theory's second limitation is that the existence of a "right to privacy" applicable to possession and use of marihuana is still speculative.

Prior to the adoption of the 14th Amendment in 1868, it had been held that the Bill of Rights guarantees, such as freedom of speech and religion, and right to jury trial, were not applicable to the states but were intended only as a limitation on the federal government, *Barron v. Baltimore*, 7 Peters, 242 (1833).

In 1868, the 14th Amendment, by its terms, applied the due process limitation to the states. How-

ever, its sponsors did not clearly confront the issue of whether the Amendment was intended as a general application of the Bill of Rights to the states or was only concerned with the due process rights of the newly freed slaves.

The Supreme Court, in a series of cases in the last few decades, has considered various aspects of the Bill of Rights in turn and concluded that under the 14th Amendment they were applicable to the states as being implicit in the concept of due process.

At present, almost all of the provisions of the Bill of Rights have been held applicable to the states. The application has been a general one and not limited to racially discriminatory state action. See, e.g., *Malloy v. Hogan*, 378 U.S. 1 (1964) (Fifth Amendment, privileges against self-incrimination); *Gideon v. Wainwright*, 372 U.S. 335 (1963) (Sixth Amendment, right to counsel); *Robinson v. California*, 370 U.S. 660 (1962) (Eighth Amendment, cruel and unusual punishment); *Mapp v. Ohio*, 367 U.S. 643 (1961) (Fourth Amendment, unreasonable search and seizure).

These cases make it clear that if the Court found state marihuana prohibitions violated due process rights, it could strike down such state statutes under the due process clause of the 14th Amendment. The question remains, however, whether the Court believes Congress has an equivalent power to invalidate, through legislation, state statutes that Congress believes are contrary to the Amendment.

The Equal Protection Clause

In 1966, the Court upheld, using broad language, Congress' power to legislate under Section 5 to enforce the equal protection clause of the 14th Amendment, *Katzenbach v. Morgan*, 384 U.S. 641 (1966).

Congress had partially invalidated the New York English literacy requirement through the Voting Rights Act of 1965. Under the Act, a person who had obtained a sixth grade education in a Puerto Rican school which taught Spanish was eligible to vote even if that person could not read or write English. Under the Court's previous interpretations of the equal protection clause, it had consistently upheld English-language literacy requirements. Nonetheless, the Court stated in *Katzenbach* that the test of whether Congress had exceeded its power was whether the Voting Rights Act was "appropriate" legislation, necessary and proper to enforcing the equal protection clause as Congress interpreted it. There was sufficient basis for the legislation if the Court could "perceive a

⁷⁰ A theory based on privacy would presumably not extend to preemption of state regulation of commerce in marihuana, but only to prohibition of possession and use.

⁷¹ *Oregon v. Mitchell*, 400 U.S. 112 (1970).

basis upon which the Congress might resolve the conflict as it did." 384 U.S. at 653.

Subsequently, in *Oregon v. Mitchell*, 400 U.S. 112 (1970), the Court retreated from the expansive language of *Katzenbach v. Morgan*, holding that Congress could not lower the voting age to 18 in state elections, even using its Section 5 powers to enforce the equal protection provision of the 14th Amendment.⁷²

The Court in *Oregon v. Mitchell* was badly fragmented. Justice Black's vote determined the outcome on the issue of the constitutionality of fixing the voting age in state elections, but none of the other Justices joined in his written opinion.

Justice Black maintained that setting voter qualifications was explicitly reserved to the states by the Constitution and that the 14th Amendment did not justify interfering with this reserved power where the discrimination was against a non-racial class, that is, persons between ages 18 to 21. He did suggest that, in areas where there was no explicit delegation to the states, Congress' powers under Section 5 might be greater. 400 U.S. at 126-27.

Justice Harlan, who also voted to overturn the federal statutory grant in state elections, stated that he believed Section 5 did not apply to voter discrimination at all.

Justices Stewart and Blackmun, and the Chief Justice, who cast the three remaining votes against the constitutionality of the statute's provision concerning age requirements in state elections, concluded that Congress' Section 5 powers apply both to voting and other situations, but only as concerns "discreet and insular minorities." In their opinion, 18- to 21-year olds, did not fit this class.

The opinions that made up the majority in *Oregon v. Mitchell*, taken together, suggest that a majority of the Court then sitting did not consider Congress' enforcement powers to be limited to the protection of "discreet and insular minorities." The swing vote by Justice Black rested on the presence of an explicit constitutional provision dealing with the subject of the legislation and apparently reserving the area of voter qualification to the states. Because of this ambiguity in *Oregon v. Mitchell* and the change of Court personnel, the scope of Congress' enforcement power under Section 5 is still undefined.

It has been suggested that perhaps the Court decided as it did in *Oregon v. Mitchell* because it did not wish to allow Congress, through Section

5, to become the final arbiter of the constitutionality of state action.⁷³ Congress could possibly have become such a final authority under the loose standard to which Congress was held in *Morgan*—that congressional action invalidating state statutes need only be a reasonably appropriate means of enforcing the equal protection clause.

The Court was probably also concerned with the basic change in federal-state relations that might result if Congress could legislate freely, under Section 5, so long as it was found to have reasonably intended to insure a more effective guarantee of equal protection.

The Due Process Clause

Since *Morgan* and *Oregon v. Mitchell* dealt with Congress' Section 5 power to enforce the equal protection clause they do not provide many clues as to the extent of Congress' Section 5 powers under the due process clause.⁷⁴

That these Section 5 powers do extend to the due process clause, in some measure, seems clear. The early drafts of the 14th Amendment were phrased entirely in terms of empowering Congress to enforce civil rights. For example, Representative Bingham stated:

"The proposition pending before the House is simply a proposition to *arm the Congress* . . . with the power to enforce the Bill of Rights as it stands in the Constitution today." ⁷⁵ (Emphasis added.)

In short, the 14th Amendment was seen as a means of ensuring the constitutionality of legislation that Congress planned to enact; the possible role of the courts was not even of concern at that time. There is therefore no reason to believe that the Amendment does not empower Congress to enforce both the due process and equal protection clauses.⁷⁶

The difficult question is whether the Court would uphold an exercise of Section 5 power to enforce due process rights if the persons affected were not insular ethnic and racial minorities. The considerations for confining Section 5 legislation to minorities seem to be as strong in the due process area

⁷² Note, The Supreme Court, 1970 Term, 85 Harv. L. Rev. 152, 166 (1971).

⁷³ See also, *id.* at 167.

⁷⁴ Fairman, Does the Fourteenth Amendment Incorporate the Bill of Rights? 2 Stanford L. R. 533 (1949).

⁷⁵ See *ex parte Virginia*, 100 U.S. 339, 347 (1879) (state judge bound in selecting jurors to comply with federal statute passed pursuant to Section 5), which apparently refers to both equal protection and due process: "[the Fourteenth] amendment was ordained for a purpose. It was to secure equal rights to all persons, and, to insure to all persons the enjoyment of such rights, power was given to Congress to enforce its provisions by appropriate legislation." (Initial emphasis added.)

⁷⁶ Congress had in fact taken care to make findings concerning the inequity of limiting voting rights to those 21 and over. 84 Stat. 314 (1970). These were apparently thought to be adequate to provide a basis for Congress to legislate as it did.

as in the equal protection area discussed above. Perhaps the Court might be convinced that a higher standard should be applied to congressional action outside the minorities situation—e.g., the legislation must be clearly necessary.

It would be difficult to demonstrate, however, where the outer limits on congressional power would be—and what would remain of the concept of federalism—if Congress could oust certain types of state marihuana prohibitions on the grounds that such prohibitions invade a due process right of privacy.

In short, the unanswered question in *Oregon v. Mitchell* is whether Congress' enforcement power is limited to the protection of discreet minorities. If so, the group of persons aided by a marihuana preemption would be a large, generalized segment of the population, even larger and less discreet than that involved in *Oregon v. Mitchell*. It is therefore uncertain that the Court would uphold Section 5 legislation nullifying state prohibitions of marihuana possession on the ground that such legislation, in Congress' view, impinged the right of privacy of the marihuana user.

STATE ENFORCEMENT OF FEDERAL CRIMINAL LAW

If Congress were held to have validly preempted the control of sale, use and possession of marihuana by prohibiting all independent state regulation and retaining only federal civil or criminal penalties, a significant additional enforcement burden would fall on the Federal Government.

The question would then arise whether Congress may either permit or require state courts to hear cases arising under federal criminal or civil statutes controlling marihuana.

At present, no federal criminal law is enforced by state courts. It is clear, however, that Congress could authorize state enforcement of federal criminal law.⁷⁷ It probably could also require states to accept jurisdiction over federal criminal cases in most circumstances.

History of State Enforcement of Federal Criminal Law

During the late 18th century, state courts were given concurrent jurisdiction over federal crimes and penalties. During this period, it became accepted that Article III of the Constitution did not

⁷⁷ It would of course be necessary to amend 18 U.S.C. § 3231, which now gives District Courts exclusive jurisdiction of offenses against the United States.

require Congress to vest the full scope of federal judicial power in the lower federal courts.⁷⁸ The First Congress therefore gave federal courts and state courts jurisdiction over a variety of civil matters.⁷⁹

In time, concurrent jurisdiction was also extended to criminal matters, primarily because the long distances which defendants and witnesses had to travel made criminal trials in federal courts inconvenient.

In addition, those who feared a strong federal government and judiciary wished to see greater jurisdiction given to state courts as a matter of principle.⁸⁰

In 1794, Congress provided in the Carriage Tax Act that suits for all fines, penalties, and forfeitures might be brought before federal courts and "before any magistrate or State Court having competent jurisdiction."⁸¹

The Fugitive Slave Act of 1793 went further and imposed an affirmative duty on State officers to arrest fugitives from labor and take them before either a federal judge or local magistrate, both of whom were required to issue a warrant for removal if the evidence supported it.⁸²

The first law authorizing the states to try criminal offenses, including embezzlement and robbery, was the Act of 1799 establishing the Post Office.⁸³ The concurrent jurisdiction provisions of that Act were retained in subsequent reenactments until 1845.⁸⁴

In the 10 years following 1799, state courts were also given jurisdiction in a number of other federal criminal cases.⁸⁵

Fear that state enforcement of federal law would result in federal regulation of state courts resulted in a gradual reversal of opinion especially among the proponents of state rights.⁸⁶ In addition, northern states were reluctant to enforce the

⁷⁸ Warren, *Federal Criminal Laws and the State Courts*, 38 Harv. L. Rev. 545, 547ff (1925); Warren, *New Light on the History of the Federal Judiciary Act of 1789*, 37 Harv. L. Rev. 49 (1923).

⁷⁹ Judiciary Act of 1789, Ch. 20 1 Stat. 73 (1789).

⁸⁰ Warren, *Federal Criminal Laws and the State Courts*, 38 Harv. L. Rev. 545, 548-551 (1925).

⁸¹ Act of June 4, 1794, Ch. 45 1 Stat. 373 (1794) (Repealed 1796).

⁸² Act of Feb. 12, 1793, Ch. 7, 1 Stat. 302 (1793).

⁸³ Act of March 2, 1799, Ch. 43 1 Stat. 733 (1799) (Repealed 1810).

⁸⁴ Meserve, *The Proposed Federal Door-to-Door Sales Act*, 37 Geo. Wash. L. Rev. 1171, 1199 n.99 (1969).

⁸⁵ Charles Warren summarized additional federal statutes giving state courts jurisdiction over federal crimes in 38 Harv. L. Rev. 545, 554, n.27 (1925).

⁸⁶ Note, *Utilization of State Courts to Enforce Federal Penal and Criminal Statutes*, 60 Harv. L. Rev. 966, 967 (1947).

Fugitive Slave laws, as they were required to do by federal statutes.

To avoid enforcing federal criminal law, a number of state courts concluded that the Federal Government was a "foreign" government (in the conflict of laws sense of that term), and that they were thus not obligated, under conflict of laws doctrine, to enforce the penal or criminal laws of a "foreign" government.⁸⁷

Despite the trend in criminal and penal cases, state courts continued to take jurisdiction of civil cases not involving "penalties."⁸⁸ The leading case of *Clafin v. Houseman*, 93 U.S. 130 (1876), held that except where Congress had given exclusive jurisdiction to federal courts, rights acquired under the laws of the United States, including rights of an assignee in bankruptcy, could be enforced in federal courts or in state courts competent to decide "rights of like character and class."⁸⁹

In the following years, the proposition emerged that state courts were not only permitted to have concurrent jurisdiction of remedial actions, but were required to exercise such power if it were within their jurisdictional authority under local law. Disagreement with federal policy, or the inconvenience of applying two sets of laws, were not considered sufficient reasons to exempt state courts from enforcing the federal law.

The Supreme Court stated that "[t]he existence of the jurisdiction creates an implication of duty to exercise it."⁹⁰ If, for example, a state court were competent to hear a similar case arising under a sister state's laws, it could not refuse to take jurisdiction over a case involving federally created rights under the Federal Employers' Liability Act (FELA).

⁸⁷ See Warren, *Federal Criminal Laws and the State Courts*, 38 Harv. L. Rev. 545, 577ff. Warren noted that this position was absurd in view of the fact that during this period the federal courts began to take criminal cases removed from the state courts where federal officials were involved, and decide these cases on the basis of state law. See *Tennessee v. Davis*, 100 U.S. 257 (1879).

⁸⁸ *Id.* at 596.

⁸⁹ See generally Note, *Utilization of State Courts to Enforce Federal Penal and Criminal Statutes*, 60 Harv. L. Rev. 966, 968-9 (1947).

⁹⁰ *Mondou v. New York, N.H. & Hartford R.R.*, 223 U.S. 1, 58 (1912). In one case the court held, however, that a state court could refuse some suits, if required to do so by state statute. Specifically, a state court could refuse to entertain a suit under the FELA between two nonresidents concerning an out-of-state occurrence, where the state statute prohibited the court from taking jurisdiction to avoid over-crowding of the state courts. The court cautioned, however, that if the federal statute in fact required the court to take jurisdiction, it might be compelled to do so. *Douglas v. New York, N.H. & Hartford R.R.*, 279 U.S. 377 (1929).

Justice Brandeis stated that "the Federal Constitution prohibits state courts of general jurisdiction from refusing to [provide courts for the enforcement of the FELA] solely because the suit is brought under a federal law."⁹¹ Such a refusal was held to constitute discrimination against federally created rights.

Therefore, by the late 1940's it was settled that in the absence of a "valid excuse" state courts were required to take jurisdiction of remedial cases arising under federal law if the courts were competent to take comparable state or sister state cases. Objection to the policy behind the statute did not constitute a valid excuse. It remained unsettled whether Congress could require a state to create courts competent to hear the cases if no such jurisdiction existed in state courts.

Testa v. Katt

In 1947, the Supreme Court undertook to bring the law concerning penal provisions in line with the law on state enforcement of federally created remedial causes of action.

In *Testa v. Katt*, 330 U.S. 386 (1947), Justice Black, drawing on *Clafin v. Houseman* and the line of FELA cases, overruled the earlier line of cases based on conflict of laws theories of non-enforceability of "foreign" penal laws. He held that applying this conflict of laws theory:

flies in the face of the fact that the States of the Union constitute a nation [T]he Constitution and the laws passed pursuant to it are the supreme laws of the land, binding alike upon states, courts, and the people, "any Thing in the Constitution or Laws of any State to the Contrary notwithstanding."⁹²

Testa v. Katt concerned the provisions of the Emergency Price Control Act awarding treble damages to a buyer who could show that the seller had exceeded the ceiling price. The Act provided that federal district courts had jurisdiction "concurrently with State and Territorial courts." The Rhode Island State Supreme Court concluded that an action by a buyer for violation of the ceiling price limitations could not be brought in a Rhode Island Court because the statute was "penal in the international sense," even though the court's jurisdiction was adequate to enforce similar Rhode Island statutes.

The Supreme Court held that a state's policy against enforcement of statutes of other states which it deems to be penal is not a "valid excuse," permitting it to refuse jurisdiction:

[T]he Rhode Island courts have jurisdiction adequate and appropriate under established local law to adjudicate

⁹¹ *McKnett v. St. Louis & S.F. Ry.*, 292 U.S. 230, 233-4 (1934).

⁹² 330 U.S. at 389, 391.

this action. Under these circumstances the State courts are not free to refuse enforcement of petitioners' claim."

Although *Testa v. Katt* dealt with a "penal" as opposed to a true "criminal" statute, the language of the case is broad enough to cover state enforcement of federal criminal law.⁴⁴

The decision speaks in terms of the relation of all federal laws to state courts, not just penal laws. Thus the Court said that the instant question in the case was

the effect of the supremacy clause on the relation of federal laws to state courts. Our question concerns only the right of a state to deny enforcement to claims growing out of a valid federal law. (emphasis added.)⁴⁵

There is no restriction to civil laws, but a general inclusion of all federal law. Further, since the Court refused to consider relevant the distinction between penal and remedial laws, it is unlikely that it would draw a distinction between the far more similar categories of penal and criminal laws.

There is some question whether *Testa v. Katt* is based on a supremacy clause rationale, which could require a state court to take jurisdiction even if it must create new jurisdiction in its courts to do so, or whether the case merely requires state courts to accept jurisdiction of penal causes of action because they accept similar cases under their own state law.⁴⁶

In the case of criminal statutes dealing with the sale, use, or possession of marihuana, however, the limits of the *Testa v. Katt* rationale would be academic, since state courts clearly have criminal laws similar to any federal laws dealing with marihuana. Thus, there would be no problem of compelling states to create new jurisdiction in state courts in order to enforce the federal law.⁴⁷

It should be noted that the *Testa* opinion does not expressly overrule the proposition that a state may refuse to take jurisdiction if it has a "valid excuse."⁴⁸ Although a policy of refusal to enforce penal laws of another state, disagreement with the federal policy, or the inconvenience of enforcing separate sets of laws have been held not to be "valid excuses," the possibility still remains that an at-

tempt to place responsibility on state courts for enforcing federal criminal law could be invalidated on the basis of some other "excuse."

For example, a heavy drain on state funds—from holding federal prisoners pending trial, or from maintaining staffs of prosecutors—could possibly be found to produce an undue burden and provide a "valid excuse." Mere burden upon the court calendar, however, would probably not be a valid excuse. In any case, federal funding would vitiate the complaint that the financial burden of administering the program constituted a "valid excuse."

State and Federal Responsibilities

If Congress passed a federal statute preempting the field of regulation of possession, use, and sale of marihuana, and required the states to enforce any criminal provisions of a federal regulatory statute, the practical division of authority between federal and state governments could take several forms.

Federal and state courts could have concurrent jurisdiction or state courts could have sole jurisdiction. Federal and state prosecutors could have concurrent responsibility or either federal or state prosecutors could have sole responsibility. As noted earlier, there is precedent for state officials prosecuting in federal courts under the federal removal statutes. It should therefore also be possible for federal officials to appear in state courts as prosecutors. A similar situation arose with the Emergency Price Control Act, at issue in *Testa v. Katt*, and a number of states did in fact conclude that they were required to allow the federal Price Administrator to appear in their courts to enforce the Act.⁴⁹

It should not present a problem for state attorney generals to appear in state courts on behalf of the United States, since they historically have done so.

Choice of Court System. There is some question whether a defendant's constitutional rights would be compromised if he were tried under state criminal procedures for a federal crime, if procedures constitutionally required in federal courts were not required or followed in the state courts.

Although most of the Bill of Rights guarantees are now applicable to the states, through the 14th Amendment, there is still some question whether all the specific details of federal procedures that are constitutionally required for the federal system must also be followed by the state courts.

⁴⁹ *Bowles v. Heckman*, 224 Ind. 46, 64 N.E.2d 660 (1946).

⁴⁴ 330 U.S. at 394 (citations omitted).

⁴⁵ "Penal" statutes impose punishment in the form of a civil fine. This distinction is most often made in decisions involving choice of law questions.

⁴⁶ 330 U.S. at 394.

⁴⁷ Note, *Utilization of State Courts to Enforce Federal Penal and Criminal Statutes*, 60 Harv. L. Rev. 966, 970 (1947). It is not necessary for the state court to entertain identical actions under its own law, but only similar actions with similar subject matter or remedy. *Id.* at 971, n. 49.

⁴⁸ The state can of course decide which of its courts is to entertain the action.

⁴⁹ See *Douglas v. New York, N.H. & Hartford R.R.*, 279 U.S. 377 (1929).

It was recently held that federal and state procedures are constitutionally required to be identical with respect to the number of persons on a jury in a criminal trial, and to the types of offenses for which a jury trial must be provided.¹⁰⁰

However, this blanket treatment of the specific details of constitutional rights has been criticized,¹⁰¹ and is still unsettled in some areas. For example, it has not been settled whether the federal constitutional right to indictment by grand jury is binding on the states, and the Supreme Court has not yet decided whether states must follow the federal unanimous jury requirement in criminal cases.¹⁰²

The problem arising if state and federal courts do not adhere to the same constitutionally required procedures would be aggravated if the prosecutor had a choice between state and federal courts. The defendant could argue that he was prejudiced by the Government's ability to choose the forum most favorable to its case.

The objections of the defendant could probably be met by a legislative provision that all proce-

¹⁰⁰ *Williams v. Florida*, 399 U.S. 78 (1970), *Baldwin v. New York*, 399 U.S. 66 (1970).

¹⁰¹ See Burger, C. J., dissenting in *Baldwin v. New York*, 399 U.S. 66, 76 (1970); Harlan, J., dissenting in *Baldwin v. New York* and concurring in *Williams v. Florida*, 399 U.S. at 117 (urging that details of federal right to jury trial not be deleted by trying to reconcile them with state practice.)

¹⁰² The following cases are now before Supreme Court concerning the right to conviction by a unanimous jury: *Johnson v. Louisiana*, Dkt. No. 69-5035, *Apodaca v. Oregon*, Dkt. No. 69-5046.

dural matters with constitutional dimensions arising under federal marihuana statute are matters of federal substantive law, which must be determined by state courts in conformity with federal procedures.

This approach would be the corollary of that followed in diversity of citizenship cases, in which federal courts enforce state law and follow state law in all substantive matters, including those procedural matters which have such a substantial impact on the outcome of the case that they may affect a choice of forum on the part of litigants.¹⁰³ In matters of procedure which do not have constitutional dimensions, the state court would follow its own practice.

Choice of Prosecution. It may be advisable to have only federal officials acting as prosecutors. Assuming that one object of a preemptive federal statute is to achieve the greatest possible uniformity in enforcement, having a variety of state prosecutors involved in the policy decisions made prior to filing a complaint and during subsequent plea bargaining, would probably not serve this goal.

If, on the other hand, prosecution were by federal officials alone, their policy guidelines could be made fairly uniform. In addition, using federal prosecutors would avoid placing the financial burden on states.

¹⁰³ See *Hanna v. Plumer*, 380 U.S. 460 (1965), *Guaranty Trust v. York*, 326 U.S. 99 (1945), *Erie R.R. v. Tompkins*, 304 U.S. 64 (1938).

II. Models and Statutory Schemes for Controlling Marihuana*

The purpose of this document can be stated quite simply: to present, in an objective fashion, the range of alternative models and statutory schemes for controlling the availability and consumption of marihuana, to analyze the benefits and detriments of each scheme, and to provide a comparative evaluation of these schemes.

Although the goal of such a project covers the entire range of available approaches from total non-involvement of the government on the one hand (the free enterprise approach) to complete prohibition on the other hand, it is impossible to do so in a value-free context.

The nature and scope of the evaluation to be performed with respect to each approach is not mathematically certain. Larger issues inevitably influence the analysis and evaluation of legal models: the relation of social policy objectives to the legal system, the dynamic consequences of legal change, the relation of legal to non-legal controls, and the proper role of the state regarding essentially private conduct.

A major impediment to rational discussion of the "solution" to the marihuana "problem" is the tendency to think only in terms of the legal system

*This chapter was prepared for the Commission by consultants Vincent R. Fitzpatrick, Jr. and J. Dean Heller, in conjunction with the Commission staff.

in general and of the criminal justice system in particular. This tendency is certainly understandable, given the history of marihuana's involvement with the criminal law. Nonetheless, the law does not exist in a vacuum and "legal" alternatives can be meaningfully evaluated only with reference to the values and policies which they are designed to implement.

An alternative approach analysis could be written wholly without reference to the law. However, since the participants in the marihuana debate inevitably clothe their policy-choices in the garb of a legal choice, the end-product of this document is an evaluation of the legal alternatives. Accordingly, the focus is on the law, but the aim is to place the legal alternatives in proper perspective.

The Commission staff devised a three-phase analysis. The first phase (Part I) is essentially introductory and is aimed at establishing a common vocabulary for subsequent evaluation. Here we will identify the spectrum of social policies available for marihuana use, introducing other social concerns which further may affect the means of implementation.

In the second phase (Part II), the range of legal implementations will be identified, and evaluation made of the benefits and detriments of each imple-

menting alternative vis-a-vis each policy. The aim is to provide a framework for choosing among the alternatives logically consistent with the stated policy. First, the *benefits* of each legal approach will be analyzed in terms of the several functions of the legal system material to the subject behavior:

- to deter members of the society from engaging in the disapproved behavior.
- to the extent that the source of the disapproval is moral judgment, to punish those who so engage.
- to detect¹ members of the society who are either in need of assistance or who present a danger to others as a result of engaging in the behavior for the purpose of isolating them for treatment and/or rehabilitation.
- to symbolize the approval or disapproval inherent in the stated social policy.

This aspect of the analysis will determine how well the legal system can be expected to form its relevant social functions. With regard to deterrence, we emphasize that the operation of the legal controls—the threat of detection, arrest, prosecution, conviction and sanction—is only one element of that complex array of social-psychological variables affecting what is called deterrence.

Another aspect of the analysis in Part II is the *cost* of pursuing the social policy in a particular way. In this connection, the consequences of altering the legal system become particularly important.

Phase three (Part III) of the analysis is primarily technical and seeks to provide a detailed analysis of the legal alternatives with which the first two phases have been concerned only in a general way. The same framework of analysis will be employed here, but the target will be the more specific issues, the stuff of which legislation is made. (Part IV is a summary of the legal implementation of social policy during the prohibition of alcohol, on both the federal and state levels.)

PART I

Law and Social Policy

Oversimplification is a major obstacle to the process of identifying the range of social policy responses that can be applied to the use of poten-

¹ It is important to note that "rehabilitation" has not been listed as a function of the legal system. The most that the legal system can do is provide a channel for identifying persons in need of treatment and/or rehabilitation, and for referring such persons to the appropriate private or public institution.

tially harmful substances for pleasure. The necessity for engaging in this task is well-illustrated by the parochialism of those that have failed to do so. The tendency of lawyers to assume that the question is primarily one of evaluating the operation of the legal system has obscured rather than clarified debate.

Of similar consequences has been the tendency of medical commentators to assume that a particular legal consequence flows automatically from a particular determination of the effects of the drug. In some ways, the labels "victimless crimes" and "public health hazard" have become rhetorical excuses for avoiding basic social policy questions.

THE SPECTRUM OF SOCIAL POLICIES

This document becomes relevant only after the Commission has reviewed the data concerning the effects and social impact of marihuana use, and has settled, tentatively at least, on a general assessment of the drug.

If the policy-maker had no other social concerns, what would be his policy attitude toward marihuana and its use? Presumably such a general assessment would be reached after evaluating the impact of marihuana use on the public safety, on the public health and on the dominant social order.

For purposes of this analysis, we have identified a range of four social policy options.² Although it is not possible to approximate all the judgments that might underly any one of these policies, a sketch of attitudes for each alternative will be made. The initial policy preference may be reached wholly without regard to competing social concerns, philosophical restraints or institutional realities. Subsequent consideration of such factors may require reconsideration of the social policy choice or rejection of implementing alternatives.

² There is a substantial argument that society should adopt a consistent social policy toward the use of all potentially harmful substances for pleasure. However, the accidents of history have so entangled the law and preferences of individual social groups that such a course would now be self-defeating, even if theoretically desirable. Still, any maker of social policy must be prepared to justify differing social policy choices on philosophical or practical grounds. The important point here is that even if the same social policy is adopted for a series of different substances, the legal implementation need not necessarily be the same. The results of the analysis performed in Part II, below, for marihuana, will be different for other substances—e.g. the patterns of use may be substantially different, the potential for abuse may be greater, the need for early detection may be stronger, etc.—so different as to compel choice of a different statutory approach.

Elimination of Use

Many persons believe that the mere use of marihuana poses a serious threat to the physical, mental or moral well-being of the individual user; that the use of marihuana precipitates violent crime; that the values implicit in the use of marihuana are wholly inconsistent with the dominant value system; or that the use of any intoxicant is immoral. A policy-maker may, on the basis of such findings and/or values, wish to eliminate the use of the drug from the social organism and prevent members of society from engaging in this behavior.

A policy-maker who holds this view might also believe that as a practical matter it would be impossible to achieve elimination of the drug and its use. In that case, elimination would still be the desired result, but society would be willing to settle for containment at the lowest possible level of use.

Discouragement of Use

A policy-maker might be primarily concerned about the individual and the social consequences of irresponsible use, whether it be excessive, dysfunctional or indiscriminate. Society, in this view, need not be preoccupied with intermittent or experimental use, but should discourage such use because of the health risks involved, or because society opposes use of any intoxicant, or because the medical community is uncertain of the effects of use. In recent years, official tobacco policy approximates the discouragement approach.

Neutrality Toward Use

The policy-maker may find no adverse individual or social impact arising from intermittent or experimental marihuana use, and may willingly defer to individual choice. He may wish to take appropriate measures to reduce excessive or otherwise irresponsible use and to remedy the consequences arising from such use. Or he may believe that a user takes certain health risks when he uses marihuana, but that such risks are not sufficient for governmental action.

Approval of Use

The policy-maker may find that, whatever the private or public health risks involved, the use of marihuana serves a useful social function. For example, it may enhance creativity, reduce aggressiveness, and encourage interpersonal communication. Accordingly, he may believe society should encourage moderate, responsible use.

The prevailing social attitude toward alcohol approximates this view. Although aware of the adverse social impact of alcoholism, society in many ways encourages the intermittent use of the drug as a relaxant.

OTHER SOCIAL CONCERNS

After a preferred policy is tentatively formulated regarding marihuana use, impulsiveness as to the choice of legal implementation should be resisted. Other aspects of the social fabric must be considered which impact both on the propriety of the policy objective and on the choice of legal means. Were marihuana use the sum, rather than a part, of the problem, the choice of measures might follow from choice of policy, the subsequent inquiry ensuring only that the most obvious means was also the most effective. The fact is that any means adopted will have a number of side effects which will impinge on other important goals and values.

This discussion is meant only to raise material questions, not to provide answers. None of these factors is likely to be conclusive by itself, unless the policy-maker has a strong predisposition regarding one or more of the issues raised.

Cultural Homogeneity vs. Cultural Pluralism

A primary concern when considering a policy for marihuana is an evaluation of how one views cultural pluralism. To what extent and for what kinds of behavior does our society seek to promote homogeneity, or conversely, to what extent and for what kinds of behavior does our society not only tolerate but *prefer* heterogeneity?

A policy-maker must consider how society has traditionally treated the introduction of new and alien customs, habits, and values. American culture is an amalgam of older and different cultures which upon coming into contact with one another, have often produced new values and customs. Although the prevailing culture has usually absorbed its rivals, the process of absorption has been so gradual that a mutual assimilation has often occurred. This is the result in part of the freedom accorded belief and association in this country and from the liberty of action permitted its citizens.

At different times in our nation's history, the preference for assimilation has been stronger or weaker, depending on other social trends. Today the idea of pluralism seems to be accepted in its own right. Cultural diversity is viewed by some as a healthy response to the technological age.

If the concern with marihuana stems from the belief that it will work a change in our society's values and mores, then some would argue that this

would not necessarily be a bad thing. However, while Americans have sometimes welcomed cultural evolution, they have strenuously opposed any revolution in social values, morals, and habits.

The issue becomes whether the new ethos which marihuana allegedly encourages would be beneficial or detrimental to the social order. To answer this question, the policy-maker must place himself on a continuum ranging from a strong preference for heterogeneity to a strong preference for homogeneity before engaging in the social and legal policy choices.

Role of the State and "Private Morality"

Assuming that marihuana use is judged to be inconsistent with the dominant value system, and therefore undesirable, the next consideration, closely allied to the first, is the extent to which the state can properly use its power to preserve the predominant moral and social value system.

Viewed differently, how broad is the right of an individual to engage in private behavior which does not imperil the person or property of others but which might, aggregated with numerous incidents of similar behavior, upset the prevailing culture?

In the past, this country has sometimes recognized the validity of laws with the primary purpose of enforcing adherence to a public morality. Even now, laws forbidding adultery, various sexual practices, gambling, drinking, and business activity on religious holy days withstand repeated challenges in courts, legislatures, popular referenda, and mass media. However, a broad philosophical debate has been provoked by such laws, focusing on the circumstances under which the dominant society can require the minority to accede to its policy.

This society has always been uncomfortable with the concept that the State may interfere with "private" moral decisions, and statutes which so invade the private realm are generally defended in terms of the indirect harm to others posed by the disapproved conduct.

A statute controlling marihuana use, based on the premise that use of the drug is morally offensive or inconsistent with the dominant value system, raises the issue of the relationship that should exist between the State and private individual behavior. This issue takes on greater force if the alleged moral damage results only from use in the aggregate.

This argument that ostensibly "private" behavior may cause grave injury in the aggregate still meets strong resistance. It received constitutional acceptance in the area of economic regula-

tion only in the late thirties, and in the area of civil rights only in the last decade. Concern is strongest, of course, when the method of control is a criminal law, directly prohibiting the activity in question. Before engaging in the choice of legal policy, the policy-maker must consider this concern and the preference for individual freedom which it manifests.

Respect for Law and the System

When a public issue involves a clash of values, there is a possibility that one side will be alienated from social authority, when it acts on the basis of values held by the other side.

This so-called alienation effect, in the context of present marihuana laws, generally involves users, especially young users, who view the laws that restrain them as being arbitrary and irrational. Many marihuana users see these laws as the product of the Puritan Ethic. Yet, those opposed to such use find the laws reasonable, and if the danger from the drug seems great, necessary. The possibility for alienation exists then, on both sides of the marihuana problem, and a concern for balancing these effects may well act as a critical determinant in the choice of controls.

Laws that punish use almost certainly provoke more resentment than would laws permitting it, since dissenters from the first may suffer imprisonment as well as disillusion. The fact that use of marihuana has been prohibited for several decades, however, acts to increase majority resistance to removal of this prohibition. Any mollification beyond modest reductions in penalties will qualify the strong social disapproval of use which the present law expresses. To some of those who support the current prohibition, this will be tantamount to approving marihuana use, along with what they perceive to be companion phenomena: sloth, lawlessness, and promiscuity.

Symbolism, Social Policy, and Law

At some point, the alienation effect merges into another important aspect of the marihuana problem; the potency of the drug as a symbol. Whatever merit lies in the charge that marihuana use has caused the so-called counterculture, many opponents and supporters alike regard use as a central feature of the new life-style. The debate over the legal approach to marihuana has become a critical issue between these divergent groups. This has resulted in an overstatement and oversimplification of larger political, social and moral issues.

The practical consequences of this symbolic struggle include the substantial element of fad in

marihuana's appeal to some segments of our youth, who see its use not only as a pleasurable experience, but as an act of defiance. The drug's symbolism creates a risk of strong political reaction to any liberalization of the present laws by the older members of the society. These laws have played a large part in turning marihuana into a symbol, since many youth feel that they cannot protest against the established order without violating the law.

This breaking of the law tends to polarize those who use marihuana and those who condemn it, and makes each side appear more alien to the other.

Marihuana and Other Drugs

A control policy for marihuana use has implications for the control of other drugs. This concern once again must be viewed from both sides. Many who seek a liberalization of the marihuana laws argue that society's present control policies toward alcohol and tobacco appear equally suitable to marihuana. If the policy-maker seeks to utilize a consistent policy-making framework, he must be prepared to justify any differences in policy or implementation between marihuana and the presently accepted drugs.

Others relate the need for controls on marihuana use to the existing legal structure governing opium, heroin, cocaine, and LSD. A constant reference to the effects, social impact and cultural context of use of these other drugs will help the policy-maker test his principles.

In addition to its promotion of intellectual integrity, such a wider perspective will also raise the various symbolic issues associating marihuana and other drugs.

Allocation of Enforcement Resources

In selecting a given policy, the enforcement implications of any given legal scheme must be carefully examined. One must assess the importance of a particular policy toward marihuana in contrast with other problems demanding societal attention.

A further analysis is necessary to determine how important the enforcement of a criminal proscription against marihuana is when compared with other criminal behavior requiring enforcement resources. Given other priorities, is the expenditure of manpower and other resources important enough to be allocated to control marihuana use as opposed to other behavior?

Law and Other Forms of Social Control

Absence of a legal proscription does not mean the absence of control. In primitive societies,

where the "legal system" is rudimentary at best, control over individual behavior is nevertheless near absolute; kinship and religious institutions impose restraints on practically all forms of behavior. Even in complex industrial societies which rely quite heavily on legal controls, most individual behavior is regulated by formal and informal controls stemming from family, peer-group, religious and economic relationships.

Despite the existence of other forms of social control, American society has since the early 20th century relied heavily on legal controls to effectuate a policy opposed to the non-medical use of all drugs except alcohol and tobacco. And even for the use of tobacco and alcohol, a less restrictive social policy has been implemented in part through legal controls.

To abandon the law completely does not appear to be a realistic alternative; too much uncertainty would attend withdrawal of legal controls, especially at a time when so many observers are skeptical of the continuing vitality of other formal social control devices. However, a more realistic view of the mutuality of legal and non-legal control schemes can be profitably explored. Legal controls will not work effectively if other social control mechanisms are not supportive. Conversely, the existence of effective control of a behavior does not prove that the legal device is responsible.

PART II

Legal Implementations of Marihuana Control Policies

The final phase in the policy-making process is to examine the various legal means of controlling marihuana and to determine how effectively and efficiently each serves the preferred policy.

THE LEGAL ALTERNATIVES

Having identified the range of social policies regarding the use of potentially harmful substances for pleasure, it remains to classify the range of legal alternatives for implementing any given policy.

On one extreme is a scheme of *total prohibition*, whereby the State prohibits the production, distribution and consumption of the substances through the criminal justice system. A less restrictive alternative, having much the same character as complete prohibition, would continue to criminalize possession and use of the substances, but would

also utilize penalties other than incarceration for certain classes of offenders.

The next series of alternatives can be classified as *partial prohibition* schemes. The common element of such schemes is the concentration on supply and distribution of the substance rather than consumption. The first alternative would prohibit all activity except possession of a small amount for personal use. The second alternative would focus only on dealing with large amounts, excepting "casual" transfers from prohibition. The third approach would seek to implement the objective of eliminating or at least reducing supply by focusing only on large-scale organized activity.

The last set of alternative legal approaches might generally be termed "*regulatory*" approaches. The implicit objective here is no longer the complete elimination of supply, but rather control over the production, distribution, and consumption of the substance, and regulation of the nature of the substance itself.³ On the one extreme would be a scheme which imposes strict controls on all phases; supply, production, distribution, information and consumption. Although there are no clear distinctions to be made between the regulatory schemes, a further approach would involve significant restriction on supply, product availability and information but would impose minimal restraints on consumption. Finally, the least restrictive regulatory model would emphasize primarily product control, and would impose minimal restraints on availability, consumption or promotion.

Any of the enumerated approaches requires other governmental and private institutions to perform functions which supplement, or overlap, those served by the legal system. For example, if social policy is concerned with the dangers of excessive use, it would be assumed that public health and educational institutions would play a significant role in minimizing the incidence of such problem use and assist persons who are engaged in that conduct.

Prohibition and Regulation

All laws controlling behavior by coercive means belong to one of two models: the criminal model or the regulatory model. Prohibition is employed in both models, but the purpose and operation of prohibition in the two systems are not the same. A

³ Since the overall social policy concern with which we are involved is the use of particular substances for pleasure, semi-regulatory approaches which legitimize substance-related behavior only for limited non-pleasure purposes are immaterial. Therefore, the legal alternatives of authorizing only medical and/or religious uses are not considered.

criminal law prohibits an area of activity (theft, assault, homicide), punishing violations with relative severity. In part, punishment serves to frighten away, by a specific threat, anyone wanting to participate in the forbidden activity. This is the so-called practical deterrent effect of the criminal law. A concomitant reason for criminalizing certain behavior is to symbolize society's disapproval. To the extent that our citizens are socialized to respect the moral authority of the criminal law, they internalize the values it reflects and are thereby "deterred" from committing the behavior by this symbolic aspect of the law, which is by far the most effective.

In most cases, official value judgments reflect those of the society at large: societal norms and the law's symbolic deterrent effect reinforce each other, and the criminal system works well.

Sometimes, however, the two judgments diverge, or the societal norm lacks real consensus. When this occurs, the criminal law may lose the support of non-legal social controls: the family, the school, the church, employers, and private associations. These, like the law, employ education, moral suasion and coercion to control behavior, but, in educating and persuading, they operate much more directly and pervasively.

Non-legal and legal controls support each other. The law, for example, provides a much more effective form of coercion than the other social institutions. Nonetheless, extra-legal controls often function well in the absence of any complementary legal measure, while the criminal law can operate without the help of non-legal controls only with limited success.

This is so because prohibitory laws require a high degree of voluntary compliance for successful enforcement, and depend chiefly on the non-legal social controls to provide it. Even more than the institution of legal punishment, these controls create and bolster the law's deterrent effect, and if these non-legal social controls lose popular support, the symbolic deterrent disappears.

How well (or poorly) the practical deterrent functions alone is illustrated by the case of alcohol's prohibition, when the social policy symbolized by the law lacked the support of large segments of the population. The existence of durable police states demonstrates that criminal laws, even whole congeries of them, can be made to work by practical deterrence, but it also indicates what extremes are necessary to accomplish this.

Regulatory laws, as opposed to criminal laws, permit the type of activity with which they deal, while attempting to channel the activity into an acceptable form. This restriction consists of pro-

hibiting all unacceptable forms of the behavior involved. Prohibitions in the regulatory model may reflect normative judgments, but in most cases the deterrence is all practical.

In properly conceived regulatory laws, practical deterrence works because the difference between permitted and prohibited behavior, in terms of the benefit sought, is small, and therefore does not merit any but the most negligible risks of sanction. Regulatory laws, of course, also share in the conditioned respect for the law that keeps many people from law-breaking at all, notwithstanding the fact that they may disagree with the judgments embodied in some of the laws. Nonetheless, regulation reducing the benefits of the regulated activity too greatly usually fails, unless a massive enforcement effort strengthens the practical deterrent. Strict price regulation, for example, rarely succeeds without a large administrative agency to administer and enforce it.

The regulatory model does not totally preclude but only restricts, restrains, or inhibits the subject behavior. If society utilizes such an approach, this choice often signifies that social concern with a particular kind of behavior does not require a total suppression.

Sometimes, however, the state may regulate when it would prefer to prohibit, because the non-legal support or moral consensus needed for a successful symbolic deterrent effect is lacking. Then regulation serves as a second-best approach, its more limited effects being preferred to the high cost of preventing an activity with no more than a practical deterrent.

In control of marihuana use, both total and partial prohibitory approaches follow the criminal model. They differ from each other in the aspect of marihuana-related activity at which they direct their coercive and moral force; total prohibition aims at both use and distribution, and partial prohibition concentrates solely on supply. As a consequence of this difference in focus, the two approaches also vary significantly in the cost of their enforcement.

A regulatory approach obviously belongs to its namesake model. Since regulation, unless overly restrictive, involves relatively few violations, its enforcement costs would be less than those of either prohibitory approach. Administering the regulatory system would cost something, but the government, by taxing or monopolizing sale, could make the entire scheme self-sustaining.

The Process of Choice

In selecting among the several approaches and means to control of marihuana, the policy-maker

must look not only to his preferred policy; he must also consider the impact of the alternative ways of implementing this policy on all the other relevant social concerns, and the effectiveness and administrative cost of any particular measure.

At first glance, each policy may suggest its own most suitable method of implementation; the policy of elimination recommends a total prohibitory approach; the discouragement policy, some form of partial prohibition; and policies of neutrality or approval imply regulation rather than prohibition. Close examination indicates, however, that almost any of the measures may serve to implement more than one policy, and since none of the controls promises to come close to full effectiveness, there is often little difference in effect upon marihuana use between measures that appear most suitable and those that appear least so. Indeed, if this paper has a theme, it is that choice of policy does not compel choice of means and that for good reasons there may be considerable difference between the way society feels about marihuana use and the way it chooses to deal with it. The effects upon related concerns and the cost of enforcement, if given any weight in the decisional process, can be crucial.

TOTAL PROHIBITION

The total prohibitory approach to control of marihuana is a direct attack, through the mechanism of the criminal law, on all aspects of marihuana-related behavior. Production and supply (sale, importation, cultivation) fall under proscription and, as an incident to those two activities or as a deterrent to use, possession does as well. Where the total approach has been applied (everywhere in this country), there has been until lately a tendency to treat all the offenses as felonies—the most serious type of crime—and to punish them accordingly.

Complete proscription of the drug, however, could also take the form of misdemeanor laws, substantially reducing both the gravity of the offense and its punishment. In fact, recent changes in most state laws have adopted misdemeanor treatment, at least for first offense possession and sometimes for casual distribution.

Total prohibition may be milder still: for example, sanctions alternative to incarceration might be imposed. Indeed, a total prohibition of marihuana might treat its use and sale as no more than a minor delinquency, like traffic offenses, though for reasons set forth below this would be a special case of the approach.

Total Prohibition and Elimination

Despite wide variation in detail, the measures that fall within the total approach share two central features. Each has the ostensible purpose of eliminating and preventing all use of marihuana, and each utilizes the system of criminal laws to accomplish this purpose.

These measures reflect a judgment that use is not only unwise, but injurious to society. Unless there is a concern that marihuana directly endangers individuals other than its users, total prohibition also expresses a belief that society may use the criminal law to protect presumably competent people⁴ from their own acts, to protect the total social fabric from the behavioral effects of use, or to preserve the dominant morality.

Total Prohibition and Other Policies

Total prohibitory measures appear consistent only with a policy of eliminating marihuana use entirely, and that policy, in turn, seems best served by some form of total prohibition.

As a general proposition, this is true. Policies of discouraging use, even if the major concern is excessive use, may, however, also require formally forbidding all supply and consumption of the drug, if nothing less can attain the desired objective. In addition, concern about the effect of liberalizing the marihuana laws on the segment of society which strongly supports prohibition—the possibility that these people would thereby lose respect for the political process and, perhaps, prove unwilling to accept the result—might be grounds for retaining the total approach.

In these cases, however, emphasis would be upon selecting the least severe method that would discourage use or would signify social opposition, not on finding the measure that would come closest to eliminating the drug entirely.

Present Measures of Control

The present patchwork of federal and state marihuana laws, without exception,⁵ fall within the total prohibitory approach, and still have as their apparent object the complete elimination of the drug's use. Forty years' experience with these

⁴ If society believes that marihuana users are not capable of determining their own behavior, either because they have smoked marihuana or because they are willing to do so, the criminal law is an inept way of handling the problem.

⁵ Even New Jersey, which no longer imposes prison sentences for the first offense of use, retains the absolute prohibition on use, possession and sale, while substituting less onerous sanctions for use or possession alone.

laws, in varying degrees of strictness and rapidly changing social conditions, makes possible fairly confident predictions of how they will work in the near future, and whether change from one variation of the total approach to another would improve or worsen the situation, measured by a given set of concerns.

For this purpose, the most important fact in the history of marihuana laws is their long period of success—well into the 1960's—followed by a precipitate, and in places near-total, loss of effectiveness with respect to a substantial segment of the population.

During the period of the laws' relative success, use of marihuana was confined largely to some Mexican-American communities in the Southwest (in which use of the drug was a long-standing custom), black ghettos in the Northeast, and some avant garde circles among artists and musicians. Although many youth in large urban centers were exposed to marihuana at some point or other, use in this group was rare, and was chiefly experimental when it did occur.

Today, by comparison, almost 40% of all people between the ages of 16 and 25 have tried marihuana, many of them have used it on a number of occasions, and a significant minority have become regular users.

EFFECT ON USE OF MARIHUANA

The sudden growth of marihuana use among students from middle and upper socioeconomic backgrounds coincided with their increasingly sharp opposition to the Vietnam war and closely followed the culmination of the civil rights movement in the early sixties. From the war and racial discrimination, many of the young may have concluded that established authority used law and the political process to further narrow and ill-conceived prejudices. This attitude may have tended to reverse the moral context of the criminal laws; violation became an act of resistance, a blow against corruption in the system.

In the case of the marihuana laws, the symbolic value of lawbreaking was further enhanced by widespread belief that the state had overreacted to the problems posed by marihuana. First, personal experience, and later, scientific study failed to corroborate long-held beliefs about the dangers of use of the drug.

Contemporaneous with these developments, institutions like the family, the church, and the school were losing some of their influence over young people. Meanwhile, under the pressure of widespread violations by members of the middle class, who were better able than the average crimi-

nal defendant to cope successfully with the legal process, enforcement agencies found it much more difficult to detect offenders and bring them to justice. Some prosecutors and a number of judges were reluctant to apply the law to violators with the statutorily prescribed severity; as the amount of violation increased so did reluctance to punish harshly. Within a very short time, the marihuana laws had lost their rational and moral support among many of the student population, and much of their practical deterrent effect as well.

Over the past few years, experimentation with marihuana and its intermittent use has spanned the social structure. Although still youth-related, use of the drug has touched all age groups. As yet, there is no evidence of a decline in this phenomenon and it will probably continue in the immediate future, whether the present laws are retained or changed. Some users, generally the older and more occasional ones who are often out of school and already established in business or a profession, are especially sensitive to the risk of being caught, and even a small improvement in the practical deterrent might serve to prevent their consumption. Within the 16 to 25 age group, however, new recruits will probably continue to join the ranks of the initiated.

Taking a longer view, marihuana use might conceivably wane as dramatically as it waxed. There is already evidence that at least 40% of the individuals who have experimented with the drug have given it up. Youthful militance appears on the decline. More visible devotion to solving the social problems which concern youth such as poverty, education, racial discrimination, and environmental degradation could reconcile students to government, and to established authority. Or, in an alternative scenario, a worsening domestic economy might turn their attention from mankind's future welfare to their own, making them wary of anything that could imperil their own material security. Whatever the general social and economic context, termination of marihuana use does seem generally to parallel integration into the larger social system.

These factors might result in an eventual equilibrium, or even reduction in the amount of marihuana consumption in this country. Two conditions, however, argue against a return to pre-1965 levels of use, at least without elimination of supply or substantial sharpening of the laws' practical deterrence.

First, during the current period of widespread use, marihuana will develop into a regular part of the social and personal lives of a significant number of people. It will function for them as

alcohol does for others, and they will strongly resist giving it up.

Second, before consumption became epidemic, most people—including most young people—believed that smoking marihuana was as dangerous as officialdom said it was. Experience and research, thus far, have failed to bear out those beliefs, and many Americans no longer see any significant risk, not legally-created, in using the drug. With the disappearance of the practical objection to use, the marihuana laws have lost any real moral force. Unless scientific research reveals some effect of cannabis significantly more harmful than those of alcohol or tobacco, that force probably cannot be regained.

EFFECT ON RELATED SOCIAL CONCERNS

Current marihuana control laws, then, best implement a policy of eliminating use only in the sense that if the prohibition against consumption were repealed or moderated, use (particularly experimental or intermittent use) would increase more than it would otherwise. In effect, the present laws at most only discourage use. At the same time, these laws impact heavily on the other, competing social concerns that are part of the marihuana problem. They involve the State in coercing essentially private behavior, though this intervention may seem necessary to some in order to preserve the society's moral tone and values.

The part these laws have played in making marihuana use a symbolic expression of dissatisfaction with the current state of affairs has already been discussed, as has their fostering additional disrespect for the system, both for its processes and its decisions, among young people.

The present laws have a complex, and not altogether helpful relation to consumption of other illicit drugs. No evidence has emerged to show a cause-and effect link between marihuana use and use of more dangerous substances, like heroin or LSD. Plainly, though, the two are closely associated; the user of these other drugs will usually have experimented initially with marihuana. On the other hand, anyone deterred by marihuana laws will probably be deterred by the other drug laws too, marihuana prohibition not really adding much to the process.

Some of those who disobey the marihuana laws however, might deal with an illegal supplier. The dealer, though not likely to be an extension of organized crime or an agent of the syndicate, may sell more than one product or know those who do, and thus the marihuana user with a regular supplier may also have a ready source of other drugs.

Already placed in a criminal posture in buying and using marihuana, the person deeply involved in the drug culture may be influenced to experiment with other drugs. The law itself tends to suggest that marihuana is no better than the other drugs, and that they are no worse than it is. Also, the credibility gap which the marihuana laws have created may swallow up the warnings against other drugs, although this particular phenomenon may have been overestimated.

ENFORCEMENT COSTS OF TOTAL PROHIBITION

Costs of enforcing the marihuana laws are, almost by definition, highest when those laws incorporate a total prohibition, since this is the most extensive form of control which the law can undertake. A total approach does have a few economies of scale; for instance, the law against possession simplifies action against traffickers, who might more often go free if proof of sale were the sole means of convicting them. The police effort and judicial resources now necessary for a serious effort in enforcement of the prohibition against use, however, far exceed any that are saved in the effort against distribution. The current experience suggests these costs are high even when enforcement is erratic and not very effective.

Moreover, difficulty in enforcing the laws in the face of widespread violation undoubtedly frustrates the enforcement agencies, may adversely affect their morale, and has encouraged some undesirable police practices. Many marihuana-related arrests seem to involve questionable searches of the alleged offender, or of his home or car.

These practices suggest to students and young people that the marihuana laws are used principally to harass them, and to repress their social and political beliefs. Given the impossibility of enforcing the prohibition evenly against all users, police may sometimes employ the laws mainly against individuals and groups whom they dislike for other reasons.

When the laws are enforced, the results can be as costly as the effort. Although less frequently now than before, some marihuana users are treated as felons or serious misdemeanants, and incarcerated for lengthy terms. In many cases, the violator is young and otherwise law-abiding, holding promise of a socially-productive life. Time in jail or prison not only shocks and embitters such a person, but exposes him for the first time to the acquaintance of professional criminals, impairs his chances for a useful career, and stigmatizes him in his own eyes as well as those of others.

While the threat of a prison sentence may supplement the deterrent value of the criminal law, the incarceration itself has not proven a successful method for rehabilitation; indeed, many observers believe it has exactly the opposite effect. Application of incarceration to penalize use of marihuana may hurt society more than the drug itself, remedying a "problem" of uncertain effects with an unduly harsh and counterproductive solution.

Political Pressure for Total Prohibition

Against the competing social considerations outlined above weighs the political resistance to softening or repeal of the prohibition against use. This pressure stems from large segments of the population, which seek strong societal condemnation of drug use, and which see the criminally-sanctioned prohibition on marihuana as a finger in the dike, holding back a flood of immoral and perverse values.

No argument is likely to affect the basic position of these segments of the population, though time and experience may prove expectations of moral catastrophe unfounded. Pending that development, any move in the direction of softening the official stand against marihuana will forfeit some of their support of established authority, of the political system, and especially of the officials who appear responsible for the change.

Elimination and a Harsher Prohibition

Confronted with these opposing sets of considerations, one dissatisfied with the present situation who still feels that a total prohibitory approach is necessary to eliminate use has two alternatives.

First, he may attempt to improve the laws' practical deterrent effect, either by stiffening the penalties prescribed or by directing an increased enforcement effort. Theoretically, this would reduce the amount of consumption, though at some added cost to the competing social concerns.

Second, he can moderate the prohibition against use, taking some increase in consumption as a trade for a reduction in enforcement costs and in the impact on other concerns. (A third and special alternative, in which the present laws are kept but not enforced, is discussed at the end of this section.)

The simplest way to improve the practical deterrent effect of the marihuana laws is to make the penalties for violation stiffer. Without actually increasing the arrest rate, the risk in apprehension does become greater, since the consequences are more severe. In theory, at least, the greater the risk of punishment, the less the law is broken, and stiffening the penalty accomplishes this without

adding to the costs of enforcing the law (except for the costs of imprisonment).

This measure also offers a political advantage: it creates the appearance of an active effort against illicit drug use, without the need for additional expenditures of the government's money or personnel.

Undoubtedly, harsher punishment would add to deterrence. Most users now, though counting mainly on the improbability of their detection, also assume that even if arrested, tried and convicted, they would probably receive no more than a suspended sentence, or a fine. Occasionally, courts still hand out prison sentences, but this happens less and less frequently.

Should courts begin to impose maximum prescribed penalties as the rule, rather than the rare exception, a significant number of people would most likely cease using marihuana, and many others would no longer keep it in their possession. Older, non-student users, who tend to use the drug intermittently as a supplement to, and not a substitute for alcohol, would be particularly sensitive to this type of threat. While few regular users would respond by giving up marihuana, they would become circumspect in their consumption, and would consume more discreetly and less frequently.

Ironically, stiffer penalties would have relatively little effect on those with whom society is most concerned—heavy users and those at the younger end of the spectrum, both of whom tend to be more immersed in the so-called counterculture and to feel, perhaps unwisely, more immune to societal strictures.

Attempts to impose stronger penalties, however, may prove to be self-limiting. Most who oppose marihuana use, for example, nonetheless doubt that the state should punish first offenders with imprisonment. Harsher sentences might drive these people, together with institutions like schools and churches, into the camp which argues for liberalization of the law. In addition, jurors who felt the punishment grossly disproportionate to the crime would far more readily acquit, and a number of courts would take pains to assist them. Were penalties made much harsher, the end result might be less, rather than more risk of punishment.

The principal disadvantage in stiffer penalties lies in the impact on marihuana's symbolic importance to the young, and in the disaffection toward established authority which its prohibition has bred among them. Heavier sentences for marihuana use would enhance the drug's symbolism, adding to the feeling of alienation, and this effect would be out of proportion to the number of such sentences.

Most young people expect official studies of the marihuana problem to bring about a lenient attitude toward use, given the knowledge about its effects that currently exists. Should the studies lead to stronger prohibition, such action would be thought to substantiate youth's worst suspicions about government, and bring many who do not even use marihuana into a militant fight for its legalization. The success which the measure might have in reducing consumption could be lost in the bitter resentment that such a move created. Symbolically, the government would turn the generation gap into a fortified moat, with serious consequences for society as a whole as well as for future marihuana policy.

Trying to improve the practical deterrent effect by more active enforcement of the marihuana laws would have the same results, in terms of alienating the young, as would harsher penalties. In addition, intensified enforcement efforts would mean sizable increase in enforcement costs, barring development of some device that can detect marihuana over distances and through walls.

Again like stricter punishment, more enforcement of control laws would reduce experimental and intermittent use, and require more discretion and restraint on the part of those who continued to consume. At the same time, a large increment in enforcement resources, manpower and material support, would be necessary to produce this effect. And notwithstanding all this, the discreet user, who had a reliable source and took pains not to draw police attention by his appearance or actions, would remain relatively safe from detection.

Both methods of strengthening the practical deterrence of the marihuana laws would probably contain the level of use. They might even reduce it; certainly, they are the only measures, except for choking off the supply, which offer that hope. On the debit side of the account, more enforcement would be very expensive and harsher penalties could backfire, producing widespread public opposition to the prohibition on use. Both methods, too, would worsen relations between the younger elements of the population and established authority.

Elimination and a Milder Prohibition

Choosing the stricter alternative to the present laws implies an overriding concern with the effects of marihuana use. A choice in favor of lesser penalties, conversely, suggests primary concern with the injury done to competing values and goals. At the same time, any measure which retains the general prohibition reflects a policy of reducing use to the maximum allowed by the other goals.

The past two years have already seen a strong trend toward a milder, though still total prohibition. The Federal Government and most states have reduced first offense possession or use from a felony to a misdemeanor, with reduction in maximum sentences to months or even days in jail. At the same time, prosecutors and judges almost always assess only fines or probation to first offenders. Those favoring decreased penalties may simply let the present trend complete its course.

So far, however, the movement to lighter penalties has been a restrained one. Most statutes, including the 1970 federal law, continue to treat as felonies second and subsequent offenses of possession, punishable by imprisonment for a number of years. Moreover, even as misdemeanors, marihuana users in the majority of jurisdictions may receive sentences of up to a year in jail. Though courts may in their discretion suspend sentence, the laws generally allow some period of incarceration as the penalty for marihuana use.

There still exists considerable room for lightening present sanctions without surrendering the absolute prohibition. Use and possession in all cases could be treated as a minor misdemeanor, not punishable by incarceration (as in New Jersey), or even as a mere delinquency, like traffic offenses, carrying only a moderate fine.

A wide range of alternative sanctions—treatment, compulsory drug education, probation, mandatory community service work—could replace incarceration altogether, or at least supplant it as the chief means of penalizing offenders. The benefits in further lightening penalties come from reducing the social costs of imprisoning marihuana users, especially younger users, and from the improvement in attitudes of users toward the rest of society, and toward the political process and the legal system.

A movement away from treating use as a serious crime would not only diminish the fear and resentment of the law in those youth who actually use marihuana, but would demonstrate to them that the system does respond, in part at least, to their views and concerns.

The more the reduction in sanction, the greater this effect will be: classifying use as a serious misdemeanor, with the continued threat of incarceration, has probably struck many of the nation's youth as a hypocritical gesture. Some, of course, will never acknowledge anything less than a whole loaf, no matter how generous the slice. Many youth, however, would probably regard laws which exacted only monetary fines, or a period of probation, as a tolerable compromise so long as the offender was no longer stigmatized as a criminal.

Abandoning incarceration as a means of preventing marihuana use would also eliminate both the financial expense and, far more important, the human cost of keeping offenders in jail. Indeed, fines would produce a small amount of revenue to offset some of the other costs of enforcement. In making the punishment fit more closely the view of the offense now held by many people and non-government social institutions, the prohibition might gain a large amount of popular support.

Enforcement of a gentler prohibition, however, would still incur the same costs in terms of allocation of resources and police practices, unless the enforcement effort itself were diminished. If penalties were light enough, this could well happen: enforcement agencies are not likely to devote much attention to a law that exacts no more than a hundred dollar fine. Enforcement would probably be limited to trafficking and to flagrant, public violations of the possession laws.

With lighter penalties, use would increase. How much would depend on the level of punishment: most people deterred by present laws would still hesitate to violate a prohibition carrying a possible 30-day jail sentence, or a \$1,000 fine. At the same time, courts, juries, and prosecutors alike would find it much easier to impose moderate fines on marihuana users, so that the likelihood of suffering the prescribed sanction, if caught, would substantially increase. For those unwilling to spend any time in jail, or unable to pay a several hundred dollar fine, reduced sentences might paradoxically act as a more effective deterrent, by improving the credibility of the law.

Treating use as only a minor delinquency by removing the criminal stigma, would probably deter only those who are already hesitant to try an illegal drug. The law would then operate chiefly to encourage discretion in use and to prevent a few people who, otherwise inclined to try the drug, do not like the idea of breaking the law. Experimental use would probably increase initially but then recede. The embarrassment of a civil fine would probably not be enough to discourage curiosity.

Aside from the increase in use, the factor arguing most against lighter penalties is the probable reaction of those elements which strongly support the marihuana prohibition. Their reaction, like that of the drug's proponents, is hard to fix. Reduction in punishment to the level of serious misdemeanors has proven acceptable to almost everyone as a concession to practicalities. More movement in that direction might disturb a minority who strenuously oppose use. Treatment of marihuana offenses as minor delinquencies would plainly represent to this group a complete collapse

in the moral posture, though not as great a one as removing the prohibition of use entirely.

Insofar as use of other illegal drugs is concerned, lighter penalties would have the opposite effect of stiffer ones: the law would distinguish considerably between marihuana consumption and other drug use.

Nonenforcement of the Laws

One special case of reduced penalties in desuetude, which removes sanctions from use of marihuana, not by a legislative repeal of the prohibition, but failure to enforce it. This technique could have two important advantages.

First, it would require little visible activity by politically vulnerable officials: elected officials would have to do little more than signal acquiescence by keeping silent on the marihuana question.

Second, by retaining criminal laws against use on the statute books, non-enforcement does not formally repudiate the uncategorical expression of societal disapproval. Indeed, the more vigorous supporters of the present law might prefer this solution to a substantial statutory reduction in penalties, since the state would continue formally to condemn marihuana and its users. Certainly numerous precedents exist, especially in the area of vice control, for laws that are neither repealed nor enforced.

In its effect on enforcement costs, desuetude would greatly improve upon a mere lessening of sanctions. Except for the most public violations, and perhaps serious trafficking offenses and cases of grossly excessive use, there would be no enforcement at all, and hence no expense. In time, non-enforcement also would probably satisfy the large majority of users, who would regard this outcome as the best resolution of the issue they could reasonably expect. Finally, desuetude as a means of dealing with the marihuana problem has the advantage of a head start: a number of jurisdictions, already balancing pragmatism and politics, seem to have adopted it, or to be moving in that direction.

Marihuana consumption, in amount and in number of users, would naturally increase significantly if the prohibition were no longer enforced. Those who looked to the letter of the law as their chief moral arbiter would still abstain, but they would undoubtedly belong to a part of the population unlikely to take up drug use (other than alcohol or tobacco) in any event. Otherwise, an unenforced law, known to be unenforced, would have much the same effect as the non-criminal fine.

Because it would permit at least a temporary increase in use, desuetude would serve a policy of elimination or one of containment poorly. It

suggests, instead, a policy of discouraging use, primarily by keeping marihuana's official condemnation on the books, or a laissez-faire policy dominated by a concern for the political reaction to any decriminalization of the drug.

In addition, because the laws against possession could be enforced selectively, against major traffickers or against users who consume excessively, desuetude might serve a policy concentrating on distribution and irresponsible use better than a partial prohibitory approach.

Selective enforcement, of course, might also be employed to harass individuals or groups disliked by the police or to screen suppression of other, legally protected activities. Such abuse is already present in the uneven administration of other vice laws and even of the marihuana laws; under general desuetude of the control laws, it could become worse. In addition, courts, which often have little sympathy with government cases brought under usually dormant laws, might resist convicting even when selective enforcement had been used in pursuit of a legitimate objective.

Finally, desuetude would not fully satisfy all of those who oppose the present laws as arbitrary and repressive. Retention of the prohibition in form would keep alive the possibility of its revival and require users to take inconvenient precautions. More important, non-enforcement as a deliberately chosen measure reflects cynicism and expediency, as well as tolerance, in official policy, and governments that are openly expedient and cynical do not inspire respect.

PARTIAL PROHIBITION

While total prohibition forbids all marihuana related acts, a system of partial prohibition would proscribe only certain of those acts and allow others. Several reasons might lead to its selection. First, a philosophical indisposition to use the criminal law to prevent certain kinds of disapproved, but private conduct might rule out any prohibition of use, notwithstanding a policy of elimination. Second, society may adopt a more limited objective with respect to use requiring more limited means of implementation. Finally, partial prohibition might be employed as a practical matter if seemingly more consistent methods proved too costly.

Varying degrees of partial prohibition are possible, including decriminalization of use only, of use and "casual transfer" (a small transfer not made as a part of a commercial enterprise) or of all marihuana related activity except manufacture and importation. Woven throughout is the pos-

sibility of an amount limitation on possession, sale, or both.

The selection among these levels will be determined by the reason for adopting partial prohibition in the first place and by the practical difficulties of implementing the different alternatives.

The Elimination Policy

A policy aimed at the elimination of marihuana use would seem to call for an implementing scheme of total prohibition. However, the practical problems and the high social and economic costs discussed in the preceding section might lead to a decision to forego the use of total prohibition to implement this policy. Society might instead turn to a scheme of partial prohibition, seeking to eliminate use by eliminating supply, with penalties and law enforcement efforts aimed solely at distribution of the drug. Success of those measures would achieve the elimination objective simply by making marihuana impossible to obtain.

A partial prohibitory scheme is therefore theoretically consistent with a social policy aimed at elimination of marihuana use. However, the failure of the present system of total prohibition to restrict supply of the drug bodes ill for any attempt to do so by means of partial prohibition. More likely, adoption of a system of partial prohibition in this context would involve an acceptance not only of *some* use but of *more* use than exists at present, at least temporarily. A system of partial prohibition would at the very least permit possession and use of limited quantities of marihuana. Even that minimal level of permissible conduct would lead to at least a temporary increase in experimental and intermittent use.

More significantly, elimination of penalties might lead to increased use by intermittent users who are now afraid to obtain marihuana frequently or keep a supply on hand. This increased demand for the drug will hardly make its distribution less attractive to potential sellers.

Therefore, if society were to adopt a scheme of partial prohibition, an eliminationist policy would exist in the sense that society would *prefer* to eliminate the drug, not in any sense of making a realistic attempt to do so. At best, this model would limit use to a level below that which it would reach were society to do away with prohibition altogether.

In the context of a social policy aiming for elimination of marihuana use, the main value of a scheme of partial prohibition is that it would eliminate the strain on the legal system caused by applying a largely unenforceable law against a

substantial segment of society that believes neither itself nor its habit to be dangerous or immoral.

The benefits basically amount to a reduction of the costs of administering the present law. Most obvious among these are the direct financial costs of the current marihuana control system: the expense of apprehending violators, the expense of trying them, the expense of keeping the convicted. The most basic system of partial prohibition would greatly reduce these costs by removing users from the purview of the criminal law.

If, in addition, casual sales were no longer criminalized, the remaining class of potential offenders would be so small that the financial costs enumerated above would be well within acceptable limits.

A concomitant benefit would be the redirection of law enforcement resources from an area where the results of enforcement measures are disproportionately small to other areas where they are greatly needed. The extent of this benefit will again depend on the level of prohibition adopted.

The same considerations apply to another and even more burdensome cost of the present system—the cost in terms of human resources lost when large numbers of individuals (particularly the young) are processed through the criminal justice system. This cost would be eliminated with regard to those present offenders whose conduct would no longer be treated as criminal under a scheme of partial prohibition.

Less quantifiable, but just as important, is the reduction in the alienation and disrespect for law and institutions which the present marihuana laws have bred, again, particularly among the young. Even those users who have not been touched by the criminal process have experienced these feelings as a result of the criminalization of conduct that they believe to be no more wrong than other, permitted forms of behavior (for example, using alcohol or tobacco).

Decriminalization of possession and casual transfer would greatly reduce these factors, though they would not be eliminated completely so long as any marihuana related conduct was criminalized.

A related development would be at least a partial reduction in the "drug subculture" psychology. So long as users of marihuana are viewed as criminals they will necessarily view themselves as part of an identifiable class of drug offenders. This type of psychological identification can lead to use of more dangerous drugs; once an individual crosses the threshold and violates *any* drug law, it is easier to violate other drug laws. Partial prohibition would reduce this psychology particularly if casual transfer were decriminalized.

Partial prohibition, then would reduce all of the economic and social costs associated with a system of total prohibition. It could have one other benefit as well: if use were no longer criminalized, excessive users might be more likely to seek help since they would no longer fear criminal sanctions. The detection and treatment goal of the criminal law might actually be fostered by the partial prohibition model.

Besides an increase in marihuana use, however, a change to a system of partial prohibition in the context of a social policy opposed to all use has another important cost. As mentioned earlier, one of the major costs of the present system is the alienation of large numbers of individuals resulting from the disjunction between the criminal law and their own view of morality. But this disjunction occurs when the law falls short of moral standards as well as when it overreaches them.

Opponents of marihuana use, most of whose objections to the drug are strongly moral, will resent the change to the extent that it condones what they think is evil in the same way that proponents resent it for condemning what they believe is harmless.

On the one hand, of course, opponents of use have less cause for resentment, since the change in the law, though it might threaten them in more intangible ways, would not subject them to imprisonment. On the other hand, this group may feel more strongly for the simple reason that the law already favors their views; to them liberalization imports not just toleration but approval. They will take offense not only in what the new law allows, but in the direction it has moved.

Of course the degree of resentment which would be created by such a change is not easy to fix. Unlike "legalization" (by adoption of a regulatory scheme) partial prohibition would retain symbolic societal disapproval of the drug and therefore would not produce so great an alienating effect. But some marihuana-related activity would be permitted, and this would cause resentment, the extent of which will depend on the level of prohibition.

The Discouragement Policy

To this point the partial prohibition model has been considered in the context of a policy originally aimed at eliminating all use, but because of the practical difficulties associated with attaining that goal, subsequently modified to accept some amount of use.

The second policy—discouragement—reflects a mild concern with experimental or intermittent use but a deeper concern with irresponsible use.

It would seem to call for an implementing scheme which would allow concentration on dysfunctional use but which at the same time would serve to discourage even experimental or intermittent use. (The desire to discourage such use might be based on uncertainty as to the effects of long-term use or on the majority's current attitudes toward the drug.)

This policy involves a possible reluctance to "institutionalize" the availability of marihuana, a low tolerance of anti-marihuana measures which prove costly or impinge on other societal values, and a consequent willingness to accept a rather large amount of use.

The primary advantage of any prohibitory model in this context is its symbolic expression of societal disapproval, which will limit the degree to which marihuana use can become institutionalized in this country.

A system of partial prohibition would preserve that symbolic effect at a minimum social and financial cost. Therefore it seems a natural and logical means of implementing a policy of discouragement. (Total prohibition would be theoretically consistent with the discouragement policy, but it would be the most severe method that could be selected and would involve measures seemingly inimical to a policy which reflects a relatively mild concern with experimental and intermittent use. A choice of a less severe prohibition would seem the more reasonable approach.)

As mentioned above, by restricting availability, partial prohibition would limit use of marihuana to a point below its "natural" level. Moreover, the symbolic expression of disapproval which it would entail would in itself discourage use of the drug, and at the same time provide strong support for other kinds of measures (such as public information campaigns) aimed at discouraging use, whether carried out by the state or by other institutions whether carried out by the state or the other institutions.

Partial prohibition also would largely avoid the major drawback to any attempt to implement this policy by regulation. No matter how strict the regulatory system, the mere fact of a change from a prohibitory approach would imply some societal approval of marihuana use. Continued criminalization of the drug's distribution precludes such an impression.

Neutrality or Approval Policies

Finally, partial prohibition is only marginally consistent with a policy which is neutral toward or approves responsible use and opposes only excessive or otherwise irresponsible use. Theoretically

cally it might be decided that the only way to avoid excessive use would be to restrict as much as possible any distribution of marihuana. An excessive marihuana user, however, would be able to obtain it in most instances despite any restrictions on trafficking. Limited availability is less likely to affect heavy users both because of their higher motivation to obtain the drug and their greater familiarity with its sources. Even a limitation on the amount that could be legally possessed would have little effect because of the difficulty of enforcing it and the possibility of constantly replenishing one's supply.

Moreover, all indications are that excessive users constitute a small percentage (around 2%) of all those who have tried marihuana. To punish sellers in the face of that small amount of abuse where society does not disapprove of experimental or intermittent use, would seem to violate notions of fundamental fairness.

If society is concerned only with excessive or otherwise irresponsible use, the costs of criminalizing even commercial dealing only would seem to be too high, and the benefit too low, to justify even so limited a system of partial prohibition. A system of regulation (discussed below) would be a more desirable means of implementing either of these policies.

Choice of the Level of Prohibition

Assuming that society saw fit to adopt a scheme of partial prohibition, it would then have to formulate the scope and extent of such a scheme. Some of these choices are rather mechanical and are discussed at length in Part III. The choice among the three basic levels, however, is an important policy matter which should be examined in conjunction with the initial choice of the proper implementing scheme.

The maximum level of partial prohibition would involve the proscription of all marihuana-related activity except possession of limited amounts of the drug for personal use. While this would reduce the social and economic costs associated with the present system, these reductions would be small if sanctions were still imposed on individuals engaged in casual distribution.

All indications are that distinctions between possessors and casual distributors are essentially artificial. The casual distributor, as the adjective suggests, is not one who deals in marihuana as a livelihood; instead, he (or she) is generally a regular user who is willing, when favored with a supply more than sufficient for home consumption, to share it with friends. In fact, distribution of marihuana to the consumer—that is, the retail

trade in the drug—is mostly a matter of gift or casual transfer. No doubt a number of sellers do use the money they receive to supplement their incomes. However, with this limited exception, the model of the drug pusher as a professional criminal, deriving large profits from the weakness and compulsions of his customers, does not fit the retail distribution pattern of marihuana.

Continued criminalization of casual distribution would vitiate the benefits of the partial prohibition scheme, since distributors are essentially the same types of offenders as mere possessors. Many individuals would continue to be subject to the penal system with its attendant costs. The alienating effect of the present law would diminish only slightly since such a large group of the alienated would continue to be criminalized.

On the other hand, the reduction in benefits caused by moving to the next level of criminalization would be slight. Decriminalization of possession would probably result in a temporary increase in experimental or intermittent use; however, decriminalization of casual transfers will probably have no bearing either way. Since the casual distributor by definition normally deals with a friend or acquaintance, he is not likely to be deterred by the threat of criminal sanctions. The social pressure to share probably outweighs the effect of such sanctions. Some user-sellers might forbear distributing any of their supply, once they can consume it lawfully, as a concession either to their fear or respect of authority, yet this seems unlikely. Proof of sale is more difficult for enforcement agencies to obtain than proof of possession, and someone who was willing before to break the law in order to use and sell would probably accept the lesser risk when only sale remained illegal.

In addition, without the aid of an accompanying prohibition on possession, enforcement agencies would have more difficulty administering a law against distribution than they do today. Because the casual seller need not have on his person, or even in his possession, large supplies of marihuana, a limited quantities provision would not be effective. Police could lure sellers into witnessed transactions, though this tactic, too, would become less available when users could no longer be coerced into cooperating. Posing agents as buyers raises problems of entrapment: courts are reluctant to permit a conviction when the police "buyer" has played too active a part in instigating the sale.

Finally, to the extent that casual sales are reduced, the user will turn to more professional sellers. This could have undesirable results and might serve to increase the association with criminal elements who push other, more dangerous

drugs. In short, restrictions on casual transfer will, at best, effect only a minimal limitation on use and then only in the case of casual users. The heavy user—the more important target—is almost certain to find some source of the drug.

Of course decriminalizing casual transfers may weaken the symbolic expression of disapproval of the drug, consequently offending some persons deeply opposed to its use. However, it is unlikely that this alienation will be much greater than that caused by decriminalization of possession alone.

It seems safe to conclude, then, that the further reductions in cost coupled with only the slight diminution of benefits justifies deproscription of casual transfer as well as mere possession, even in the context of the elimination policy. In the context of the discouragement policy such a conclusion is even more compelling. Even the increased level of use caused by allowing casual distribution might be considered tolerable by society and hence no cost at all. If not, the increased level of use would still be small enough to justify its acceptance in view of the benefits involved.

The major problem which flows from the above conclusion is devising a method of distinguishing between casual and commercial distributors. That practical difficulty is discussed in some detail in Part III, but it should be noted here. A law decriminalizing casual transfer might provide an effective screen for some commercial sellers, depending on how the line is drawn. In any event, it is not desirable from the point of view of an elimination policy to go a step further and allow commercial sales with only importation and manufacture prohibited. Such a step would make marihuana as readily obtainable as tobacco. This enormous increase in availability could lead to institutionalization of the drug in terms of substantially increased use and number of users.

Furthermore, decriminalization to such an extent would intensify the alienation of persons opposed to marihuana use by reducing society's expression of disapproval almost to the vanishing point.

In return, costs would not be significantly reduced. The social costs associated with criminalization would have little relevance in the case of the relatively small number of persons engaging in criminal activity for economic gain. The monetary costs would, of course, be far less than those associated with criminalization of possession and casual transfer precisely because of the vast difference in the size of the groups involved. There would still be some police abuses, particularly those associated with entrapment, but, again, those abuses would be limited by the relatively small area involved.

In summary, then, little would be gained and much would be lost by a system which criminalized only the "wholesale" and smuggling aspects of the marihuana trade.

At that point it would seem preferable to eliminate criminalization altogether and move to the regulatory approach. This would seem to be true even if the discouragement policy were adopted. A system of regulation could be structured to discourage use almost as much as a system which prohibited only manufacture and importation while it would avoid the costs even of that minimum level of criminalization and provide other benefits not possible under any prohibitory system.

REGULATION

In a system regulating marihuana use, the law would permit production, sale, possession, and consumption of the drug, but only under certain controls. Criminal prohibitions would still be employed to prevent deviation from the prescribed ways of dealing in and using the drug. This would parallel the approach generally adopted for alcoholic beverage control, though marihuana regulation would naturally have its own unique characteristics and, profiting from the long experience with alcohol, hopefully avoid some of the mistakes present in the latter's control.

A decision in favor of the regulatory approach could result from a policy of discouraging use (while concentrating on the prevention of excessive use) or from a determination that a prohibitory approach, though better implementing a chosen policy of elimination, is too costly. Further, it is the most appropriate means of implementing policies of neutrality toward or approval of experimental or intermittent use.

The particular reason behind these various policy choices, in turn, will govern the details of the regulatory scheme. For example, limitations on amount and potency of marihuana, the degree of its availability from legal sources, and perhaps even the price of the drug will depend on whether regulation is a second-best means of effecting a policy which disapproves of general use, or a preferred method of implementing a more tolerant objective.

Before turning to the consideration of each policy, however, certain general observations are in order.

As mentioned in the preceding section on partial prohibition, the lack of any criminal deterrent will mean that some persons will try marihuana who otherwise would not have and others will increase the frequency of their use.

Even more significant in this context is the increased availability certain to result from legalization of distribution. For the first time marihuana would be easily and safely accessible to the experimenter and even to the younger (below 16) and older (over 25) populations not now heavily engaged. The result would almost certainly be even more use than would occur under a system of partial prohibition. The scheme could be structured to limit availability somewhat, but as pointed out below, the efficacy of any such limitation is not assured.

The change to a regulatory system would have another major effect: it would remove the main symbol of societal disapproval of marihuana use, the criminal sanction.

While regulation does not necessarily denote societal approval of marihuana use, many would undoubtedly view it as such. This factor, coupled with the increase in use, would cause even more resentment among the anti-marihuana majority than a change to partial prohibition. On the other hand, removal of criminal sanctions would eliminate altogether the alienating effect of the present law on those who use the drug and would eradicate the illegal subculture psychology discussed earlier.

Another salutary effect of a properly implemented regulatory scheme would be the demise of the marihuana black market. A legal and regulated system of marihuana distribution would replace the current illegal one, eliminating the necessity for users to deal with those interested in selling more dangerous drugs.

But one word of caution is in order: any attempt to regulate too severely, particularly in the area of availability of the drug, might cause users to turn to a black market despite the legal source of the drug. This factor is discussed in more depth below.

For the sake of simplicity assumptions concerning certain basic outlines which would not vary whatever policy were made. Most of these are not absolutely necessary—alternatives are discussed in Part III—but they are most likely and are assumed for the sake of discussion. It was assumed that the government would not be directly involved in either production or distribution. Production would be carried on by licensees under strict quality control to ensure the purity of the product. This would avoid the danger of adulterated, possibly dangerous, substances sold as marihuana. Distributors would also operate under license.

Any system would forbid transfer to individuals under a specified age. The proper age limit and problems of enforcement are discussed in detail in Part III.

Finally, driving a motor vehicle under the influence of marihuana would be proscribed under any regulatory system. Again, the details of such a ban and the practical difficulties of enforcement are discussed in Part III.

The Elimination Policy

Regulation cannot eliminate marihuana use, and in fact will probably result in an increase of use. Adoption of a regulatory system in the light of societal preference that marihuana use be eliminated would mean that, as a practical matter, society had given up its preferred objective and accepted the inevitability of a relatively large incidence of use.

At best, regulation might contain marihuana use at a level below that which it would reach in the absence of any regulation. The decision to regulate rather than prohibit would rest on a recognition that any attempt to eliminate use, short of totally unacceptable police measures is futile, and that any prohibitory system, partial or total, involves high costs.

Applying the same kind of cost-benefit analysis used with the other means of control, those favoring regulation value the advantages of removing control from the criminal process much more than they fear the dangers of increased marihuana use, and the reaction among those strongly opposed to the drug.

It must be stressed that increased use would result under a regulatory system; it would be difficult to contain use at a level much below that which it would reach were society to allow the unregulated and unrestricted distribution and use of marihuana.

The lack of deterrent, loss of symbolic disapproval, and increased availability of the drug would undoubtedly lead to greatly increased use of the drug. The regulatory scheme could be designed to restrict use to some extent, for example, by placing a limit on the amount of marihuana which could legally be purchased, with some sort of rationing procedure (such as coupons) to prevent an individual from exceeding the limit by many separate purchases. The number of retail outlets available in any locality could also be restricted by requiring a specified distance between outlets or simply by providing only a few licenses, perhaps as a function of population. A major city might have no more than three or four outlets and a smaller city only one, with consequent inconvenience for the potential purchaser. In addition, sale hours could be kept short, reinforcing the inconvenience factor.

The kinds of outlets selected could be of such a nature as to emphasize the nature of the product

being procured. For example, specified drug stores could be licensed to sell marihuana or the drug could be sold through some sort of medical facility. Coupled with the inconvenience caused by limited outlets and hours, this might at least cause the potential user to stop and consider what he was doing before purchasing the drug.

Other measures, such as intensive advertising campaigns could be aimed at convincing people not to use marihuana. On the other hand, any commercial advertising on behalf of the drug would be banned. Consumption of marihuana in public might also be prohibited, though this would serve more to make use less visible than to contain it.

But none of these measures, in fact, could contain use at a level below present levels. An amount limitation might restrict frequency of use but not numbers of users. Inconvenience in purchasing marihuana might dissuade some potential experimenters who have little real interest in taking the drug, but would have little effect on those who really want it and probably no effect on regular users.

Dissemination of antimarihuana information and proscription of pro-drug advertising would almost certainly result in a somewhat lower level of use than if the drug were freely advertised. Potential experimenters who are only weakly motivated toward use to begin with would probably forego use because of anti-marihuana publicity. At any rate, individuals not otherwise inclined to try it would at least not be tempted to do so by advertising. But these various measures would result in a modest limitation of use at best.

To the extent that coercive measures such as amount limitations or forced inconvenience are successful, they create a possibility of the one evil an effective regulatory system must avoid—a black market.

Users confronted with serious obstacles to the purchase of marihuana might well turn to the black market that would undoubtedly spring up to serve them, thus vitiating many of the benefits of a regulatory scheme. It is improbable that society could achieve the necessary balance and significantly contain use while avoiding an illegal market in the drug. Thus adoption of a regulatory scheme to implement a containment policy would again involve high costs of enforcement in order to have realistic hopes of achieving the policy objective.

The Discouragement Policy

Regulation is far more suited to a policy which mildly disapproves of experimental or intermittent marihuana use and accordingly seeks merely

to discourage such use while concentrating on excesses. The cost reductions discussed above would, of course, be the same in this context, but the disadvantage in increased use would weigh much more lightly. The objective of this policy, unlike those of the preceding ones, would not be compromised by the adoption of a regulatory scheme.

An anti-marihuana campaign and a ban on pro-marihuana advertising coupled with the other measures mentioned above could formally express society's disapproval and discourage use, without being so severe as to lead to the existence of a black market.

Relatively high purchase prices engineered through price regulation and excise taxes could also serve as a disincentive to use (without such a requirement, marihuana would be significantly less expensive than alcohol at least in terms of relative intoxicant strength).

By equalizing the cost of alcohol and marihuana, or perhaps making the latter a little more costly, society could again mildly discourage use. It must be stressed, however, that the price could not be set unreasonably high or else users would again turn to the black market. Some upward disparity in price would be acceptable in view of advantages in purchasing from a legal distribution system, but the cost could not become prohibitive. It is this consideration which would greatly limit the effectiveness of a high price requirement in restricting the amount of use. Some containment of use might result from prices set low enough to avoid a black market, but not much. On the other hand, prices could be set high enough to have a mild discouraging effect and low enough to avoid an illegal market.

There is, however, one major argument against use of a regulatory system to discourage marihuana use. As mentioned earlier, a change from the current prohibitory approach to a regulatory scheme would remove the main symbol of society's disapproval of marihuana use: it would give many the impression of societal approval of use despite any public information campaign to the contrary. This might undermine the discouragement posture of non-legal institutions, as well as that of the state itself. Even a partial prohibitory system retains strong symbolic expression of societal disapproval, and this symbol—the criminal law—is perhaps the most effective means of discouraging use even when use itself is not proscribed.

To the extent that the discouragement policy is premised on moral considerations, the involvement of the criminal law is particularly important. For this reason, as well as to avoid the majority resentment sure to result from legalization, society might instead decide to use partial prohibition to imple-

ment the discouragement policy, at least as an interim measure. As discussed earlier, that method would also effectively implement this policy, and though more costly in certain respects, would avoid the major deficiency discussed above.

Another major objection to a regulatory implementation of the discouragement policy relates to the potential public health risks. It is possible that the primary motivation for a discouragement policy is not the individual or societal impact of experimental or intermittent use, but rather the potential effects of heavy or very heavy use over a long period.

The policy-maker may determine that the only way to minimize the incidence of such heavy use is to discourage experimental or intermittent use also. If this reasoning underlies the discouragement policy, then the increase in experimental or intermittent use inevitably accompanying institutionalized availability of the drug would also significantly increase the incidence of heavy use. If this concern runs deeply enough it would prove to be the conclusive factor, especially if the policy maker perceives the present increase in use to be a transient phenomenon.

Regulation is most suited to a social policy which is neutral toward, or approves of, experimental or intermittent marihuana use and disapproves only of excessive or otherwise irresponsible use.

Here the similarity to society's alcohol policy is most striking and a similar approach—but one which avoids the drawbacks of the alcohol regulatory system, particularly regarding excessive use—seems called for. As mentioned earlier, it would offend basic notions of fairness to criminalize use or even sale where society does not disapprove of use.

Moreover, the high costs associated with any degree of criminalization hardly seems acceptable where the only benefit sought is the elimination of excessive use, particularly in view of the fact that neither prohibitory approach seems to offer much hope of success in eliminating excess. A reasonable regulatory approach seems far more consistent with this policy.

A regulatory system devised to implement a policy of neutrality would vary significantly from those discussed above in that it would not severely restrict the number of retail outlets available. There would be no reason for such limitations since society would not be attempting to discourage responsible use, and excessive use is hardly affected by them. On the other hand, there would be strong pressure to avoid strict limits in order to channel people into the legal distribution system and out of any illegal one. Therefore a relatively large num-

ber of outlets and reasonable sale hours would be appropriate.

Some limitations would be built into the system, however, mostly in the hope of preventing excessive use. For example, the same kind of reasonable amount limitation which was discussed above would be implemented, and no advertising would be allowed. It is true that a user bent on excessive use could often obtain enough to fulfill his wish, but if the regulatory system were attractive enough to most purchasers it should eliminate any black market and hence make it more difficult for the excessive user to get all of the drug he wants.

More importantly, the amount limitation might prevent other users from inadvertently slipping into heavy use, while the proscription on advertising would remove one temptation to excess (thus deviating from most alcohol control schemes). Along these same lines, imposition of a higher price than is economically dictated could serve to cut down on frequency of use, though as in the case of the amount limitation, great care would have to be taken not to create a black market.

Another measure which would help to curtail excessive use would be a limit on the potency—in terms of THC content—of the product sold. Of course, regulatory schemes chosen to implement the other policies (particularly to protect novitiates) would also control potency, but the main value of such control would be in reducing the dangers of excessive use. By cutting down on the THC content of the drug, as well as the amount of marihuana sold, some of those ill effects could be forestalled. Again, however, control of potency would have to be restrained in order to avoid black market pressure.

Thus, even with respect to excessive use, a regulatory system is hardly a guaranteed success. The devices discussed above would not be likely to stop the marihuana user who is strongly inclined to excessive or otherwise irresponsible use. (They are more designed to limit the number of persons who fall into that category.)

Perhaps the greatest benefit of regulation would be to "normalize" use and bring it out into the open. This, in turn, would facilitate detection and treatment of irresponsible users. Moreover, a regulatory system would allow society to devote most of its energies and resources to elimination of excessive use—the only concern of this policy—rather than dissipating them on experimental or intermittent use. Finally, the credibility of a campaign against irresponsible use would be greatly enhanced, particularly among the young, by what users would view as a realistic and reasonable attitude toward experimental or intermittent use.

PART III

Formulating a Legal Scheme

To this point, we have been discussing the range of legal alternatives in a general way. However, many difficult issues arise in conjunction with the implementation of each scheme.

The purpose of this section is to identify these threshold issues (e.g. drawing the amount line in a decriminalization scheme, determining potency limitations in a regulatory scheme) and evaluate the alternatives from the same analytical perspective employed in Part II. At this juncture, however, benefits and detriments will be compared *within* a particular legal approach, the objective being to recommend the best way of executing each approach, should it be chosen by the policy-maker.

Two qualifications have been made; on the one side of the spectrum, initial attention has been paid not to the strict model of complete prohibition, but rather to the lenient model. The theory here employed is that the current public policy trend is to permit (or in some situations compel) lenient treatment of first offenders, young offenders or possessors for personal use. It has been assumed that present policy will not be reversed. Accordingly, first attention is paid to alternative sanctions for each of these classes of persons. Examples of the alternatives considered in lieu of incarceration are compulsory education, compulsory work service, and probation and fines (administered through the criminal justice system or through an alternate civil adjudicatory framework).

On the other side of the spectrum, instead of presenting three alternate regulatory models, we have focused on the strict end of the spectrum (including consideration of the full range of possible restraints on consumption), on the assumption that the chosen social policy is not likely to go farther than neutrality to controlled use.

TOTAL PROHIBITION

This section is predicated upon the assumption that the policy-maker has decided to recommend *labeled acts*, but with a modification of the method of dealing with violators.

There are two major possibilities within this approach. First, all marihuana-related acts could be considered crimes, but certain violations would be punishable by sanctions other than incarceration. Second, some violations might be characterized as "offenses," not bearing a criminal stigma and dealt with through a separate administrative

process. Each of these possibilities will be discussed in turn.

Sanctions Other Than Incarceration

Under federal law and under the laws of every state, incarceration is the main penalty provided for possession or sale of any amount of marihuana. The only exception to this rule is New Jersey, where incarceration is not permissible (by judicial decree) for first offenders convicted of mere possession.

Of course in recent years there has been a strong trend toward reducing penalties, and there is no longer a minimum sentence requirement in any state. Moreover, despite the availability of incarceration, the overwhelming majority of first offenders are not sent to jail, but are instead placed on probation or given an unconditioned release. Yet the possibility of incarceration is always present.

This section will assume the continued existence of laws criminalizing all marihuana-related acts but will present and analyze various alternatives to the use of incarceration as a penalty for violation of those laws.

Five possible alternatives will be discussed: (1) fines, (2) probation, (3) required attendance at educational clinics, (4) required treatment, and (5) a requirement that the offender perform services for the community for a specified amount of time. One of these alternatives or any combination of them could be used in dealing with certain kinds of offenses.

Several general observations are applicable whatever the alternative involved. First, it should be noted that the system could either eliminate entirely the possibility of incarceration for certain offenses, or retain that possibility while placing primary reliance on the alternative sanction. The latter possibility would provide enforcement flexibility particularly where commercial dealing is clearly indicated but not provable. However, it would also lend itself to inconsistent application and would probably not decrease the resentment caused by the present system to the same degree as would the former. Adoption of a system which retained the possibility of incarceration, then, should include an express statutory preference for alternative sanctions, perhaps by requiring special findings prior to the imposition of a jail sentence.

Second, alternative sanctions could be prescribed in the case of mere possession or casual sale (the practical problems associated with defining the type of conduct are discussed in the section on partial prohibition), but would not apply to large

scale commercial dealings in the drug. A decision to adopt this kind of modified total prohibitory approach would indicate strong disapproval of the drug and a desire to limit its use, coupled with an unwillingness to accept the high social and economic costs associated with incarceration of certain types of offenders. As discussed earlier those costs involve for the most part individuals who have been guilty only of possession for their own use or of casual transfer of the drug.

On the other hand, large scale commercial dealing in marihuana is the kind of standard criminal behavior for which traditional criminal penalties are appropriate. The same factors which were discussed in the section dealing with the choice among levels of partial prohibition apply here—the social and economic costs associated with incarcerating users and casual sellers simply do not apply in the case of a much smaller group engaged in breaking the law for economic gain. Moreover, in their case the threat of incarceration may have a real deterrent effect. Removal of that threat could only serve to increase the scope of commercial dealings.

Of course, the entire issue of the deterrent effect of the law must be considered in any discussion of a possible reduction in penalties. It may be argued that removing the threat of incarceration will also significantly reduce the deterrent effect of the present law on potential users and casual sellers. It would seem, however, that continued criminalization of all marihuana-related acts would retain most of the deterrent effect of the current system despite reliance on other sanctions.

It is clear that the threat of incarceration has had little deterrent effect on the millions of persons who have already used marihuana. The use of any drug is an "expressive act;" that is, it is an end in itself and is not done to achieve some other goal. Thus there is little possibility of rationally weighing the value of a goal against the danger of a penalty.

In a context such as this, the prohibited conduct usually can be deterred by actual fear of punishment only where application of punishment is swift and certain. Otherwise it is primarily the system itself—the very fact of criminalization—and not the actual sanction involved which effectuates whatever deterrence is achieved. In the drug law area, enforcement difficulties make swiftness and certainty of punishment almost impossible to attain.

This is not to say that there is absolutely no chance that removal or reduction of the threat of incarceration will lessen the deterrent effect of the present system. It is possible that some individuals who are dissuaded from experimentation by the present system would not be deterred if incarceration

were no longer a possibility. It is also possible that some who now restrict or forego use out of the fear of a jail sentence would not do so were that fear to be removed. But the numbers of persons falling into these categories would seem to be very small, particularly in light of the fact that as a practical matter incarceration is rarely imposed for a first offense.

Clearly, then, the symbolic deterrent effect of the law would lose very little by a switch to other sanctions.

There may be instances where incarceration is desirable to reinforce the specific deterrent effect of the law. This situation would arise in the case of the repeated offender who has clearly not been dissuaded from violating the law by the actual imposition of other sanctions. It might be desirable at some point to impose a jail term on such an individual in order to discourage future illegal conduct on his part.

The question here is where to draw the line. Should incarceration be imposed for the second offense or should repeated offenses be necessary? It is extremely difficult to make that determination, but if the alternative sanction model is chosen it would seem desirable to allow the sentencing authority in its discretion to impose a short period of incarceration (perhaps up to 90 days) for third and subsequent offenses.

We turn now to the practical considerations associated with each particular alternative mentioned above.

FINES

The imposition of fines is, of course, a traditional means of dealing with law-breakers. Most present marihuana laws provide for the imposition of fines in lieu of, or in addition to, incarceration. Thus, the use of this alternative sanction would require little legislative innovation, and the main question is the appropriate amount.

The requirements would seem to be twofold: the fine must be large enough to be a credible penalty but not so large as to make payment impossible or financially catastrophic. A fine in the \$100–\$200 range for first offenders (perhaps less in the case of youthful offenders) would probably achieve this objective.

For the reasons discussed earlier there would seem to be little reason to treat casual sellers differently from users, but it would of course be possible to provide the court with the authority to impose stiffer fines on such sellers if it seemed warranted in a particular case.

There is one obvious practical problem presented by any system relying exclusively on the imposition of fines. In any group of law violators there

will be some individuals who simply do not have the financial resources to pay the fine. Marihuana offenders are usually young, and often students. In such cases, parents might be able and willing to pay the fines, but this would seriously diminish any salutary effect on the offender. One way of handling this problem would be to provide for payment of the fine in installments and to provide, where possible, that the offender actually pay the fine himself. This might well involve directing the offender to obtain employment in order to pay the fine.

Finally, it should be pointed out that a system of fines is probably the most attractive alternative from a strictly economic point of view. Such a system would not only be relatively inexpensive to administer, it would actually serve as a revenue-producing function.

PROBATION

Most jurisdictions currently impose a term of probation in lieu of incarceration for some first offenders convicted of mere possession. It would be possible to eliminate altogether the possibility of incarceration with regard to that class of offenders as well as casual sellers, and place all such offenders on probation.

Probation would, of course, avoid most of the exacerbating effects of incarceration discussed above. Counseling would probably dissuade some susceptible offenders from experimenting with more dangerous drugs. It might also tend to restrict heavy use by informing apprehended users of the possible dangers.

But the problems and costs seem to outweigh the expected benefits. The rehabilitative benefits are, in the case of experimental or intermittent users, essentially the same as those of a system of required education. Yet the education system would in economic terms be far less expensive than a system of probation for all offenders. Such a probationary system would require large numbers of well-trained individuals if it were to be of any use at all. Since educational programs could deal with relatively large numbers of offenders at any given time, far fewer personnel would be required, and the costs would be correspondingly reduced. Further, in the case of problem users, probation would not be as effective as a program of psychiatric treatment or in-depth counseling.

It would seem, therefore, that probation could be used most effectively as a supplement to other sanctions (such as fines or required attendance at educational clinics) in a limited number of cases where individual counseling is thought to be nec-

essary. This would retain the possibility of probation for those most likely to benefit from it and at the same time avoid the high costs and inherent limitations of a system based solely on probation.

EDUCATIONAL CLINICS OR COURSES

The third alternative listed above consists of requiring the attendance of marihuana offenders at special educational clinics or courses. This technique, which could be most effectively used in combination with penalties such as fines or probationary arrangements, might be particularly useful with respect to first offenders.

Such courses, which would be roughly analogous to driver training and safety courses required in some states for young traffic offenders, could consist of one or more sessions in which participants are confronted with the scientific and medical evidence relating to drug abuse and are invited to ask questions as they desire.

Available resources could include films, discussion sessions, presentations by physicians or by ex-addicts, specially prepared booklets, etc. Such clinics might also afford a unique opportunity to get parents of teenage offenders involved in discussing and dealing with drug problems.

Such courses, if broad enough in scope, could discourage "experimenters" from moving on from marihuana to other more dangerous drugs. This could be especially true in the case of offenders who began experimenting with marihuana out of curiosity and who might be tempted to turn to other drugs as a result of similar motivation. Such courses, if carefully planned, could also underscore the point that drug dependency frequently stems from psychological needs manifested in persisting drug usage. This in turn could prompt some excessive drug users to seek professional help voluntarily.

From a cost point of view, the educational clinic model is quite attractive. Films and other materials for use in the courses could be centrally prepared using state and federal resources and could be distributed free to local communities. Even communities with limited local resources could take advantage of the program, perhaps by recruiting local teachers as volunteers to conduct the periodic clinics.

The educational alternative is not without its difficulties, however. Emphasis on alleged deleterious effects of experimental or intermittent marihuana use could jeopardize the credibility of the entire program. Moreover, while this model may have an impact on a first offender who experimented with marihuana out of curiosity or group pressure, it will undoubtedly have only limited

effect on the excessive user who suffers from a real psycho'logical maladjustment. Such a person needs therapy, not instruction. The educational model might make such persons aware of the existence of a problem, but it could not be expected to solve it.

To overcome these difficulties, the clinic would have to adopt an approach of discouraging use, perhaps by stressing the scientific uncertainty as to the effects of marihuana, while concentrating on the dangers of excessive use. The clinic could also deal with the broader social and moral questions of pleasure-seeking and the role of intoxicants in our society. This might cause even experimenters or intermittent users to examine their motives and desires in this area. Furthermore, the course could cover all forms of drug abuse—including alcohol abuse—and thus help to prevent marihuana users from becoming involved in the abuse of more dangerous drugs.

Finally, the course would not attempt to deal directly with persons already indulging in excessive use of marihuana and multi-drug use though it might serve as a means for identifying those individuals and channeling them into treatment facilities.

TREATMENT

The fourth alternative would consist of requiring convicted offenders to undergo psychiatric consultation and treatment. A number of states currently provide for such treatment, where necessary, as an alternative to incarceration. Such programs seem, however, to have been concentrated on abusers of "harder" drugs. Some of the existing programs utilize government-operated clinics, while others require the offender to obtain treatment on his own.

This approach has some potential for effective use among very heavy users of marihuana. Heavy use of the drug, and a multi-drug using pattern may well indicate deeper maladjustments. Professional treatment alone offers realistic help to an individual with this type of problem.

On the other hand, this alternative would have no application in the case of the overwhelming majority of marihuana users. There is no indication that experimental or intermittent users suffer from any extraordinary psychological problems; they have merely chosen to use an intoxicant which society has decided to proscribe. Education backed by the imposition of a fine will prove far more effective in their case.

Since only a small percentage of marihuana offenders are in need of psychiatric counseling, any treatment system dealing solely with marihuana would be extremely expensive. To be effective

it would have to include the entire spectrum of available measures: psychological testing, psychiatric therapy and consultations, group therapy, etc., and would vary in length according to the individual offender.

Whether the system involved public or private clinics, or a combination of the two, significant resources both in terms of personnel and physical facilities would be required. Therefore it would seem that the "treatment" alternative would be practical only as part of a broader program dealing with all kinds of drug abuse. The larger base of potential beneficiaries would then justify the large costs involved.

COMMUNITY SERVICE REQUIREMENTS

The final alternative involves the sentencing of drug offenders to perform certain socially useful work in lieu of incarceration. This technique, which might be used most effectively in combination with a threat of incarceration if the assigned work is not performed, is currently under consideration by the Massachusetts Legislature.

Under the plan as proposed in Massachusetts, offenders would be sentenced to perform, for a set number of "work service hours," services benefiting the people of the state. Such work, to be undertaken without compensation, would be performed on behalf of the state or any political subdivision thereof, any community organization, or any private business or organization engaged in service of general benefit to the community. The number of "work service hours" would be ordered by the court within limits established by statute (e.g., not more than 100 hours for the first offense of possession of marihuana). The work projects would be supervised by the state probation department.

Theoretically, this kind of approach may be beneficial from a therapeutic point of view. Insofar as heavy use of marihuana and other drugs stems from a preoccupation with one's own problems or from sheer boredom, the community service work program could effect a significant change by encouraging the offender to redirect his interest and his efforts to the problems and concerns of others. To the extent that this effort is successful, the individual may find that he no longer needs the "crutch" or the stimulus of drugs to feel satisfaction with himself. But this philosophy applies to only a small percentage of marihuana offenders. And the plan does have a major drawback.

Any plan which attempts to be, and actually is, a deterrent to the performance of certain acts is likely to be viewed as a form of punishment. To

require an individual, as punishment, to engage in social service activities, could have the adverse effect of souring him on such activities in the future, hardly a result that would be in the best interests of society. Further, to compel an individual to "serve his fellow men" may produce not only a resentful attitude, but shoddy service. The impression that such service is punishment is inescapable. Unlike work penalties directly related to the offense committed (e.g., the requirement that persons arrested for littering clean a length of highway), this requirement would normally have no relationship to drug usage. It would be a punitive measure taken against the offender because he broke the law, and it would be certain to produce feelings of alienation, though not so much incarceration. Moreover, if the program were to degenerate into menial labor assignments, it might be as harmful as a system of incarceration.

The other alternatives would seem more suited to limiting marihuana use and would not involve these problems. Where marihuana is concerned, the work model seems to have little inherent value; it instead indicates a desire to avoid treating the conduct involved as criminal coupled with an unwillingness to face the political difficulties of partial prohibition or regulation. Such a compromise may be required as a political necessity, but it is difficult to justify it in terms of internal benefits.

COMBINATION OF ALTERNATIVES

As previously suggested, the most effective implementation of the various alternatives to incarceration would be their flexible use in combination with one another or with other forms of punishment or treatment. Obviously, no one alternative can serve the needs of every case. While a fine or required attendance at an educational clinic may be useful in the case of an experimenter or first offender, it may have limited value for an excessive user whose basic problem is a psychological one. Similarly, the use of a treatment program might be beneficial in the latter case but wholly inappropriate for the average first offender. It is even possible that the use of improper alternatives in certain cases could aggravate the individual's problem rather than solve it.

The following model is an example of how the various alternatives might be effectively combined into an integrated program. It represents, of course, but one combination—numerous variations being possible. In each case the threat of incarceration would be used to insure compliance with the court's directive.

First Offense: Required attendance at an educational clinic; plus, at the discretion of the court, the imposition of a fine or probationary period.

Subsequent Offense: Required consultation with a psychologist or a psychiatric social worker. Such consultation should normally consist of an interview combined with such forms of psychological testing as may seem appropriate.

If psychological problems were *not* indicated as a result of the consultation, the court could at its discretion, impose a fine (greater than that allowed for a first offense) or an additional probationary period.

If psychological problems *are* indicated, the court would follow the advice of the psychologist or psychiatric social worker as to the form of treatment warranted by the situation. This could include group therapy, individual therapy, participation in community service projects, etc.

Administrative Sanctions

Some marihuana related acts could be legally classified as "offenses" or "infractions" not bearing a criminal stigma and punished through administratively imposed sanctions such as "civil" fines.

This model would be analogous to the present system of dealing with minor traffic offenses in most states. It would provide a half-way step for legislatures desiring to make penalties more lenient but unwilling or politically unable to adopt either a partial prohibitory or regulatory model.

The basis for adopting this approach would seem to be a desire completely to divorce certain marihuana offenses from the criminal justice system coupled with a desire to retain a symbolic expression of societal disapproval. The characterization of certain acts as mere offenses would reduce one of the greatest social costs of the present system—the widespread feeling of alienation resulting from treating marihuana users as criminals. At the same time, the expressed disapproval of use would be more satisfactory to members of the population who are strongly opposed to marihuana use. This system would also reduce the burden on a criminal justice system which is already staggering under an excessive workload.

The attributes of a "civil" fine approach are difficult to define. In the context of a public action against an individual, the notion is presently ambiguous. Three separate meanings can be identified. First is the removal of the possibility of incarceration. The conduct is punishable only by the levy of a fine. However, the procedural attributes of the criminal justice system remain: arrest (or summons), proof beyond a reasonable doubt, the possibility of criminal contempt citations, the

existence of a "record" and the social consequences of conviction. This is the case with traffic offenses in many jurisdictions.

The second type of situation to which the term civil has been applied is the special procedural framework outside the traditional criminal justice system. Informality and less onerous consequences characterize the "traffic court." Again, however, the system is not substantively separated from the criminal law, and "conviction" still has disabling consequences beyond the fine itself.

Finally, the last meaning of civil fine removes the disabling consequences from conviction (other than internal to the system itself). No external consequences would attach to conviction and no incarceration for nonpayment would be permitted. Presumably, those persons preferring a "civil fine" are seeking such a system.

It would appear, however, that such an approach would accomplish little more than would partial prohibition. The real deterrent effect of either scheme would be focused on public activities. Since a partial prohibition scheme would prohibit public use, might permit contraband seizures and might fine possession of over a certain amount, it would certainly exert a significant force toward keeping marihuana use private. It is difficult to see how a civil fine would have a greater deterrent impact than such a scheme.

The only additional feature of the civil fine is its symbolic aspect. It is arguable that it symbolizes the discouragement policy more firmly than would a partial prohibition approach. However, the converse is probably also true. The retention of a fine, however slight, will continue to give marihuana a symbolic status, which is a major impediment to the achievement of a discouragement policy.

The likely result of a civil fine system is non-enforcement except when use is flagrant or when seizure results from harrassment. It would be the epitome of the selectively enforced law. It is this particular feature which perhaps carries a constitutional defect. The weight of the law would be most likely to fall on indigent groups in central cities, those least likely to be able to afford to pay.

In addition to the equal protection problems thereby raised, the approach risks institutionalization of the harrassment which might now be mitigated by the protection of the criminal justice system. That is, under a criminal approach, due process provides some protection; under partial prohibition, no formal consequence can flow from harrassment (other than seizure of the marihuana).

Under the fine system, however, harrassment is rewarded by a legal consequence unprotected by

the requirements of criminal procedure. An analogue here is the restraining influence of the exclusionary rule in criminal law.

PARTIAL PROHIBITION

The general contours of a scheme of partial prohibition have been discussed at length earlier in this chapter. It would involve decriminalization of possession and casual transfer of the drug under certain circumstances. As a practical matter it would most likely be chosen to implement a policy aimed at discouragement of use. (Theoretically, an attempt could be made to eliminate use through a system of partial prohibition but success in such a case seems unlikely.)

The immediate goals of a system of partial prohibition would be to keep use private while keeping enforcement activity out of private homes, to continue disapproval of all use, and to decrease excessive use, while avoiding the heavy costs of total prohibition.

The specifics of any system of partial prohibition should be viewed in this light. These specifics involve questions of amount and potency limitations, distinction between casual and commercial sales, the problem of "public" as opposed to private use and possession, the question of the legal status of the drug itself, and the problem of cultivation.

Amount Limitations

By its very nature, a partial prohibition scheme requires a statutory distinction between a person possessing the drug for his own use and a person possessing the drug with intent to distribute it for profit. Persons in the second class are functionally equivalent to persons who have already consummated a sale, and accordingly, every effort must be made to apprehend such persons.

Theoretically, a scheme could be drafted in which the operative elements of the offense relate only to the intent of the possessor. For example, a burden could be placed on the prosecution to demonstrate in every case an intent to sell.

Such a scheme was employed in many states during alcohol prohibition, and was also employed in the Drug Abuse Control Amendments of 1965. Conversely, a much more rigid scheme might place the burden on a possessor to prove that he was *not* holding the drug with intent to sell, but intended to utilize it only for his personal use.

Each of these simple approaches has a major drawback. Where the burden is on the prosecution, effective interdiction of trafficking would inevitably be sacrificed since proof of intent to sell is often difficult to amass. Indeed, only possession

of substantial amounts of the drug, or a documented pattern and practice of distribution would suffice.

If the burden were always on the defendant, on the other hand, most of the benefits of the partial prohibitory approach would be vitiated. All possessors, even of minute amounts, would be subject to arrest and prosecution; and the possibility of divergent judicial practices regarding the definition of amounts for personal use, together with the likelihood that juries would base their findings on matters beyond the defendant's testimony, entirely preclude uniformity of application.

A rational statutory approach to this dilemma would be to designate presumptive amounts. The variations on this theme are innumerable, both in terms of the strength of the presumption and in terms of the amounts specified. For example, it could be conclusively presumed that possession of four ounces or under were for personal use; or it could be conclusively presumed that possession of over four ounces were for purposes of sale.

Policy-makers may be willing to tolerate the possibility of injustices in particular cases inevitably flowing from such inflexible rules on the theory that such rules are most easily enforced. On the other hand, a policy-maker might prefer a more flexible system under which the statutory amounts are not conclusive and may be rebutted by appropriate evidence from either side.

As to the amount itself, this line would necessarily be arbitrary. On one extreme, it is clear that a person possessing over a kilogram of the drug is holding it for sale. On the other extreme, it is clear that a person possessing five grams or less is holding it for his own use and possibly that of his friends. Within these bounds, most observers tend to propose round figures such as one ounce, two ounces, or four ounces. The one ounce approach would have the benefit of conforming to prevalent retail distribution patterns of the drug.

Whatever the chosen approach to the strength of the presumption and the specified amount, the policy maker must also consider where the drug is possessed. Several factors material to the partial prohibition scheme suggest the propriety of distinguishing between possession in public and possession in private.

First, one of the primary reasons for rejecting a total prohibitory implementation of either an eliminationist or a discouragement policy is uneasiness about the invasion of privacy attending prohibition of possession for personal use. Consequently, in drawing the amount line, the policy-maker might be willing to give the individual the benefit of the doubt in private, while applying a specific limitation in public.

Second, another policy objective of the legal scheme might be to keep use of the drug private. In this regard the choice of the amount which can be legitimately possessed in public may be dictated by more than a desire to limit supply.

Defining the Drug

Assuming that a specific public amount limitation (perhaps one ounce) were decided upon, the key question raised is "one ounce of what?"

The problem, of course, is that cannabis is a plant, not a drug; only certain parts of the plant contain the psychoactive chemical substance—delta-nine-tetrahydrocannabinol. In addition, the drug content of plant parts is variable, generally decreasing in the following sequence: resin, flowers, leaves. Practically none of the psychoactive substance is found in the stems, roots or seeds.

Consequently, fluctuation in drug content and thus the drug-effect of cannabis is dependent on the relative proportions of these plant parts in a given mixture, and also on the level of activity of a particular plant. The relative activity or inactivity of a given plant depends on a variety of agricultural considerations.

This variability is one of the reasons why an arbitrary amount line must be drawn in the first place. It is also the reason why differentiating between the different cannabis substances is so difficult. Distinguishing between less potent and more potent preparations of the drug (between "marihuana" and "hashish") is fine in theory; in reality it is almost an impossible task.

It has been recommended that distinctions be drawn on the basis of potency. "Marihuana" refers to a preparation generally containing varying quantities of the flowers and their resinous secretions, leaves, small stems and seeds. Its potency (amount of active substances contained in the entire mixture) can vary from .0% to 4.0% THC, although it generally ranges from .5% to 1.5%.

"Hashish" refers to the preparation containing primarily the resinous secretions of the flowers. Its potency can vary from 1% to 10% THC, although it generally ranges from 2% to 5% potency.

Assuming for the moment that there are legitimate public health reasons to justify an attempt to distinguish between "marihuana" and "hashish," there are three alternative approaches:

The Potency Approach. Under the simple potency distinction, it would no longer be a prohibited act to possess one ounce of cannabis preparation of say, 1% THC or less; possession of any preparation, no matter how small, containing more than 1% THC would continue to be an offense.

A variation here is the complex potency approach under which it would no longer be an offense to possess an amount of cannabis whose weight times potency did not exceed a specified limit, possibly 1.0. Thus possession of $\frac{1}{4}$ ounce of 3% THC cannabis would not be an offense, nor would possession of $1\frac{1}{2}$ ounces of .5% THC cannabis.

The Form Approach. Under the form approach, it would no longer be a prohibited act to possess one ounce of the loose mixture of flowers, leaves, stems, and seeds; however possession of any amount of the resinous mixture would continue to be an offense.

The Simple Amount Approach. Under this approach no attempt would be made to differentiate among cannabis substances. Possession of a specified amount (one ounce or less) of any cannabis substance would not be an offense.

Before launching into an analysis of these alternatives, it is interesting to note that the dichotomy between plant and drug is also relevant to existing law. As noted, inactive samples of cannabis are available. Thus, if the drug, not the plant, is the contraband, it is arguable that the prosecution, as an element of its case against the defendant, should have to demonstrate the presence of THC in the seized sample. Alternatively, it could be argued that the defendant should be acquitted if *he* can show that the seized cannabis included no active components.

However, we are aware of no cases establishing either rule. The courts have generally viewed the plant itself as the contraband. Interestingly enough, however, some courts have recently held that a person may not be prosecuted for possession of an amount so small that it cannot produce the psychoactive effect (the usable amount rule).

THE POTENCY APPROACH

The potency approach, in either its simple or complex forms, suffers from three major impediments.

The first is substantive. Except in a small number of "strict liability" regulatory offenses, a fundamental tenet of our criminal jurisprudence is the notion of *mens rea*, loosely characterized as intent. A person may generally be held criminally responsible for an act only if he intended its illegal aspects (*mens rea* is a complicated legal notion with many subtleties, but for our purposes it can be simplified). A person smoking marijuana obviously does not know the exact potency of his compound. Especially in close cases (1.2% THC), it strains the philosophical fabric of the system to suppose that the criminality *vel non* of a person's

conduct would have to await a laboratory analysis. In addition, except in cases of extremely potent forms of hashish, the basic objective of the distinction would not be served. That is, the potency of the substance has very little relevance to whether the possessor holds the substance for personal use or distribution.

Apart from this substantive problem, the potency approach also involves a number of procedural difficulties. Since it would always be possible that a subsequent laboratory analysis would demonstrate that a particular sample of marijuana was possessed in violation of the law, a partial prohibitory scheme utilizing this approach would retain the prospects of harassment and selective enforcement now plaguing the present system. Also, since the possessor would be in a state of limbo pending a precise chemical analysis of the seized material, a series of procedural questions arise. For example, could the suspect be required to remain in custody pending such analysis?

Finally, a third major obstacle to the potency approach is its infeasibility. Its application would require a substantial expenditure by each police department to equip crime laboratories for THC evaluation. If police departments were to pool funds for a central lab (or if it were done on the state level) the procedural difficulties would escalate. To this problem is added the imprecision of chemical analysis. After microscopic examination, the seized substance is exposed to a Negm color reaction test. A positive color reaction *may* indicate the presence of cannabis constituents, but there is no proof of the exact nature of the substances present. Cannabis, cannabis resin, or pure THC give the same reaction.

There are two more sophisticated chemical tests which can detect the presence of THC. The first is the gas chromatography test, which is the more expensive and time-consuming of the two. It is considered by chemists to be a fairly difficult test to run.

The thin-layer chromatography test is cheaper and easier to run. Although the thin-layer test is less time-consuming, it still requires at least half an hour per analysis. In addition, most scientists do not believe that the thin-layer test by itself is sufficient evidence upon which to base a definite determination that a given sample contains a given percentage of THC. They recommend that identification be based upon a microscopic examination plus *both* types of chromatography in order to ascertain the precise percentage of THC present. Given these scientific problems, it would appear that the potency test presents insuperable difficulties.

THE FORM APPROACH

Given these substantial impediments to the potency approach, a policy-maker interested in distinguishing between "marihuana" and "hashish" might do so on the basis of form. Here there are two problems. The first is definitional. At the present time, nine states distinguish between marihuana and hashish for penalty purposes, but only one state, Virginia, attempts to define hashish:

the resin extracted from any part of the plant *cannabis sativa*, whether growing or not, and every compound, manufacture, salt, derivative, mixture or preparation of such resins, or any resin extracted from the mature stalks of said plant.

Naturally, the key word is "resin." But rather than representing a clear physical distinction, "resin" is merely a convenient label for describing certain substances exuded by many plants, all of which have certain properties in common. For example, they are brittle in solid form and melt when heated.

The problem is that "marihuana" mixtures contain some resins and "hashish" preparations often contain plant parts other than resins. So for legal purposes, resin is not the only factor. How could it be defined? Predominantly resin? Substantially resin? Any such formulation might well fall to a vagueness attack.

In addition, the form approach also encounters a substantive challenge. Presumably sought because of a general reflection of divergent potencies, the marihuana-hashish distinction is subject to an equal protection attack. That is, a person possessing weak hashish might challenge the rationality of a law which assigns him criminal liability which is escaped by a person possessing a more potent marihuana mixture. If the object is suppression of traffic, the distinction makes little sense; if it is the possibly divergent effects on health, the distinction is equally untenable.

THE SIMPLE AMOUNT APPROACH

Thus, major substantive, procedural and practical difficulties impede attempts to distinguish by statute between marihuana and hashish. The remaining question is whether society (for purposes of a partial prohibition scheme) has any overwhelming interest in doing so.

The first possible interest is public health. The risk of psychological ill-effects attending heavy cannabis use over a long term are greatest when the substance is most potent. Fortunately, heavy use of cannabis is rare in this country, and the drug now consumed is generally "marihuana." To the extent that the policy-maker wishes to mini-

mize the at-risk population, he might wish to take special steps to limit the consumption and availability of hashish.

However, a statutory distinction between marihuana and hashish in the amount provision could play no role in this connection. At the consumption level, no amount limitation, whatever the drug, will prevent excessive use. In addition, the availability of hashish does not relate directly to intensity of use since most users of cannabis learn how much they need to smoke in order to attain the desired high, and then go no further.

Thus, if the hashish form of the drug is being used, a proportionately smaller amount will be smoked. Cultural and social differences between East and West are likely to prevent "hash-head" phenomenon from occurring in the United States.

Some argue that if possession of the same amount of marihuana and hashish is permitted, hashish importation and availability would rise, since an ounce of hashish will last longer than an ounce of marihuana. Such a change in traffic pattern is not assured, however, and the problem for law enforcement is the same in either case: to interdict the supply.

Marihuana is the most frequently used cannabis product in the United States; and decriminalization of possession of hashish as well as marihuana is unlikely to change ingrained tastes and preferences.

In short, the simplicity and relative ease of enforceability of an approach which treats all cannabis substances uniformly would appear to outweigh any potential enforcement benefit of a marihuana-hashish distinction.

Casual and Commercial Sellers

Another difficult problem presented by the partial prohibition model is that of distinguishing among types of sellers. That distinction would be necessary if the policy-maker chose to decriminalize casual transfers—transfers of small amounts to friends or acquaintances for little or no profit.

As in the discussion of the amount limitation, the problem here is to distinguish between the "possessor," the person engaged for his own use, or that of his friends, and the "commercial distributor," the person seeking to profit from traffic in the drug.

One possible way to draw such a distinction is by the amount sold in any one transaction. Thus sales of over one or two ounces could be proscribed but sales below that point would not be prohibited. This would permit casual transfer since there would be little reason why a user would have to

transfer any great amount to a friend. He would be on notice that if he did so he would be committing a crime, and there would be little non-profit reason to do so if there were the possibility of making the legal, though smaller transfer.

Under this system sales of a still higher amount—perhaps of over a kilo—could be characterized separately and punished more severely. Transfers of that size are a strong indication that the seller is engaged in a commercial venture, and treating that activity severely would serve to restrict distribution by placing the main enforcement emphasis on the smaller class of more traditional type criminals.

Furthermore, persons engaging in many transactions involving large amounts could be still more severely punished. This would be the "continuing criminal enterprise" type of offense already incorporated in federal law. It would present problems of proof, but no more than the usual problems involved with large scale organized criminal economic activity.

A severe problem, however, is presented by the attempt to distinguish between the casual seller and the retailer who makes many small transactions for profit but in each case within the prescribed limit. The retailer could make many trips to his source to obtain the minimum amount and still earn enough to make the activity commercially worthwhile. If such individuals were to be immune from criminal prosecution, the availability of the drug would no doubt increase greatly.

This problem can be approached in a number of ways. The offense can be defined as "regular commercial dealing for profit," evidence of a certain number of transactions within a specified period, or of a certain gross amount sold within a specified period, could establish a presumption of guilt. Or the presumption could be conclusive, with transfer of the specified gross amount or the specified number of transfers within the defined time period constituting the offense.

But any attempt to deal with retail sellers in terms of limits on amount or the number of permissible transfers is bound to perpetuate many of the ills of the present system. Entrapment, illegal searches, and selective enforcement would be certain to result unless police officers decided to forego any attempt to enforce this part of the law (a distinct possibility in light of the difficulties involved).

If police did attempt to enforce this aspect of the law, an inordinate amount of resources would have to be committed with little hope of success. Police would have to "tail" suspects for a period

of time or use numerous undercover agents. In any event, only the most severe violators would run even a minimal chance of detection.

A simpler approach would be to proscribe any transfer of any amount whether for profit or not, if that transfer occurred in a public place. This would serve one of the main goals of partial prohibition—keeping marihuana activity private—while retaining the benefits of decriminalization. A user would be free to transfer a small amount of the drug to his friends in the privacy of his own home either gratuitously or for remuneration sufficient to cover his costs. This would mean that those persons which partial prohibition seeks to remove from the criminal process would be removed so long as they kept their activity within these unburdensome limits.

At the same time, this approach would restrict regular commercial retail dealers—the target class—who can only effectively peddle their wares in public places. Of course the law would prohibit the use of one's home as a cover for a commercial enterprise, as it did during Prohibition.

This type of approach would be more easily enforced. The public sale violation would be proven by the same type of evidence as now since any single transaction would be a crime. If a seller were to use his home as a cover for a retail marihuana business, proof would be somewhat more difficult, but not impossible. It would not be too difficult to show that a stream of individuals had entered a certain house and purchased the drug.

Of course in the case of bona fide private casual transfer, it would be very difficult to enforce amount limitations as well as any prohibitions of a profit on such transfer. Those restrictions would be imposed for the sake of consistency and to prevent egregious activity, but they would not be the focal point of the law and would probably be enforced only in extreme cases.

As mentioned earlier, a major goal of this approach is to restrict marihuana activity to private areas and at the same time to keep marihuana-related police activity out of private homes. To the extent that these goals were achieved, some minor violations within the privacy of the home would be tolerable. As a practical matter, enforcement officials would simply stay out of the house—except where a clear indication of a "front" existed—and not seek to detect minor violations. On the other hand, the real target—the commercial dealer—would be a realistic target of police enforcement.

Cultivation

Related to previous issues is the question of whether cultivation for personal use should be permitted. Marihuana is easily cultivated and can even be grown indoors. While the domestic product is generally less potent than imported substances, it would still present an economical drug source for many individuals. The danger inherent in allowing unlimited cultivation is obvious—it would greatly increase the potential availability of the drug with likely increases in both frequency of use and number of users.

On the other hand, a total ban on cultivation might have the undesirable effect of professionalizing the drug traffic. In addition, since most cultivation for personal use would be in the home, a total ban would at least theoretically impinge on the avowed goal of keeping police activity out of the home.

Therefore, the best approach might be to permit a limited amount of private cultivation. Such cultivation would have to be in a private place out of public view, and probably should be limited to only one plant. Of course detection of violation of the amount restrictions would involve the same problems as detection of violations of the limitations on the permissible amount of marihuana which could be possessed in private, and detection would probably come about only accidentally or as a side effect of other investigation.

On the other hand, public growing of marihuana would be such a visible activity that enforcement would be relatively easy and the normal abuses associated with enforcement of drug laws (entrapment, illegal searches, etc.) would not be likely.

The theoretical purity of such a scheme may be offset, however, by the symbolic requirements of the law. In the first place, wholesale prohibition of cultivation may be required by this country's international obligations under the Single Convention on Narcotic Drugs. Second, the sincerity of society's attempt to implement a discouragement policy might well require a firm rule where cultivation is concerned. If private growth is legitimate, then the law imposes no inconvenience whatsoever in the path of individuals who choose to use the drug.

Public Use

The idea of public use of cannabis runs counter to one of the purposes of the proposed decriminalization recommendation: keeping use private. Public use should therefore be proscribed. "Use in public" should be narrowly construed to mean

smoking or otherwise ingesting cannabis in a public place. Public places do not include homes, apartments or hotel rooms, though exact definitions would probably have to await development of case law on the issue.

The reasoning of this particular recommendation is simple: to keep use private, outlaw use in public. Toleration of public use would be a much more drastic step than mere toleration of possession for personal use. It would appear to symbolize societal condonation of the use of cannabis. That apparent approval, coupled with high visibility of use, could encourage non-users to try the drug. Moreover, society has a legitimate interest in keeping the use of any intoxicant private where the use of that intoxicant is offensive to the large majority of the population. Finally, potential threats to safety would be limited by a proscription on public use.

Such a prohibition would probably be quite effective. It could most easily be implemented by defining public use as "disorderly conduct", similar to that already proscribed in every state. Penalties could involve fines of up to \$100 for example, and perhaps jail terms of up to 30 days. It is unlikely that many individuals would risk penalties of that sort when they could legitimately smoke in private. In fact, public use would probably take place only in the midst of very large gatherings of young people (e.g. at a rock concert) or as the result of a desire on a particular individual's part to dramatize his or her use. Time will probably diminish both these possibilities.

Legal Status of the Drug

At the present time, not only is almost all marihuana-related conduct subject to criminal penalty, but the drug itself is subject to seizure by the Government wherever found. Primarily, such seizures are made incidental to the arrest of the user or possessor, in order to use the drug as evidence of the crime. Nonetheless, the Government may search for and seize and destroy marihuana even when it cannot prove a crime has been committed. In short, the drug has the status of contraband, and is itself outlawed.

Assuming that present laws are changed and use and possession (and perhaps even casual sale) are no longer criminal, a question arises regarding the legal status of the drug itself.

Would adoption of a partial prohibition scheme simply withdraw the criminal sanction from a disapproved behavior relating to an illegitimate substance? Or would it remove the behavior of smoking marihuana from the legal system altogether, including its direct incidents.

Phrased another way, would the drug lose its legal status the moment it came to rest in the possession of a person whose behavior did not violate the law? Or would it lose its illegitimacy only at some later point, for example when carried into the home, or only when finally consumed?

As can be seen, this is a difficult question. Either view is theoretically defensible, and the decision must be made in light of other criteria, including the functional utility of the alternative schemes and their respective social consequences.

There are no constitutional objections to a law which treats marihuana as contraband even though possession and use of the substance is no longer criminal. The Fourth Amendment does not limit reasonable searches to those attendant upon arrest or designed to produce evidence of criminal offenses.

Current federal provisions governing the issuance and execution of search warrants, however, do not authorize searches for property when the possession of that property is not a crime (except in one specific and narrow case not applicable here).

While the Comprehensive Drug Abuse Prevention and Control Act of 1970 makes all "controlled substances which have been manufactured, distributed, dispensed, or acquired in violation of the [Act]" subject to seizure and forfeiture to the United States, it too provides for issuance of search warrants only in circumstances "relating to offenses involving controlled substances."

Thus, present federal law does not provide for the search for (as opposed to the seizure of) contraband in cases where no criminal offense has been committed. If mere possession and use of marihuana were no longer criminal, new legislation would be necessary to authorize the issuance of search warrants for the drug when it was not possessed in amounts exceeding the lawful maximum, or incident to illegal sale, or in some other fashion which made possession itself a crime.

Moreover, the present federal law appears to distinguish between controlled substances, including marihuana, which have at some time in the past been manufactured, distributed, or acquired in violation of the law and those presently possessed and in the process of being distributed unlawfully. In the latter case, the substance is declared contraband and subject to seizure and summary forfeiture. In the former, on the other hand, seizure may be made only upon process issued pursuant to the Supplemental Rules for Certain Admiralty and Maritime Claims, presumably a more complicated process. Again, the law would have to be amended to provide for sum-

mary seizure and forfeiture even when the drug was not currently possessed illegally.

In determining how to approach the legal status of marihuana under a partial prohibition scheme, the policy-maker must take into consideration the policies underlying the selection of that scheme itself, and limit the power to search for and seize the substance accordingly. Since one of the principal reasons supporting decriminalization of mere possession and use is the protection of personal privacy, a law which permitted searches of private dwellings, or private vehicles, or of persons for contraband marihuana, in cases where there was no probable cause to believe the substance was held for illegal purposes, would seriously frustrate the general reform of the marihuana control laws. In effect, such legislation would continue to authorize substantial invasions of privacy in order to suppress the use of marihuana.⁶

Moreover, a law permitting searches for marihuana wherever found would prove as expensive to enforce as the present prohibition on use, and would provide too facile a means of harassment of persons who were otherwise complying with the control laws. For these reasons, it would appear that searches for the drug should at least be limited to those cases where the police have probable cause to believe that a crime has been committed.

The next question is whether the drug, when possessed legitimately, ought to be subject to seizure if found by law enforcement authorities in the course of other investigative activity. For example, should it be subject to seizure from an automobile if the officer sees it in the course of enforcing the traffic laws? That is to say, should the drug remain contraband until it comes to rest in the home?

On the one hand such a scheme would be consistent with some of the aims of a discouragement policy. It has been noted that a decision to decriminalize possession of marihuana does not signify societal approval of such conduct, and the reasons for removing criminal prohibition on mere use may stem not so much from a lack of concern about the dangers of marihuana use, as from a recognition of the problems associated with its criminal prohibition.

⁶The National Prohibition Act of 1919 specifically authorized searches for intoxicating liquors "unlawfully held or possessed, or [which] had been so unlawfully used," precisely so that the liquors could be seized and destroyed. 27 USCA, Sec. 89. (West, Ed. 1927). All the same however, that law prohibited searches of a private dwelling, "unless it is being used for the unlawful sale of intoxicating liquor. . . ." Id.

That society no longer prosecutes possessors, however, does not mean that it must protect them by creating a property right in marihuana. Society can still indicate its strong disapproval of the drug by making it subject to seizure when its users bring it into public view.

There are also a number of practical reasons for retaining marihuana's contraband status. Most important, outlawing the drug (as opposed to its consumption) is a means by which society can continue to signal strong disapproval of marihuana. Secondly, making the substance subject to seizure discourages its public display and use, and at less cost to society than a strict criminal prohibition on public use. Also, seizure could be used as a police tool against suspected commercial traffickers where there is not sufficient proof for arrest and prosecution.

On the other hand, a scheme defining marihuana to be contraband in public also carries some costs, not the least of which is to facilitate harassment. The prospect is a real one that the contraband device could be utilized by the police to harass persons whom they do not like. This phenomenon is not peculiar to marihuana users, however, and no effective way has yet been found to restrain enforcement authorities from questionable or unreasonable searches, if the street personnel are so inclined.

Judicial disciplining of unreasonable police searches has never proved an effective means of restraining such practices. Perhaps when marihuana has been seized as a result of an unlawful search, the possessor should have the right to reclaim the drug, although this would be a significant erosion of its contraband status.

In practice, the availability of a contraband law may add very little to the potential for harassment of marihuana users. The issue really becomes a concern about the integrity of the system. Why, it might be argued, should potentially lawless police be given a tool to legitimize their unconstitutional behavior? The only answer to this question is how heavily it weighs when aligned against the symbolic and functional features of the public contraband scheme.

Public Intoxication

Public intoxication, no matter what the intoxicating agent, presents a difficult legal problem. Our present method of dealing with public drunkenness does not offer a very attractive model for dealing with public cannabis intoxication. The street-sweeping, the drunk tanks, the cynicism and neglect of the "revolving-door" are well-known and ineffective.

Most commentators on public intoxication today are of one mind. They feel that use of the criminal justice system is inappropriate and that the public health department should replace the courts as the appropriate agency for handling the problems of intoxication.

The consensus is that public intoxication by itself should not be a crime, and that persons found to be intoxicated in public should be taken either to their homes, or, if necessary, to public health facilities where various optional treatment programs may be offered.

Cannabis intoxication is not as visible as alcohol-induced intoxication, but there may be instances where it is clearly indicated and offensive to the public. The interest in keeping use of marihuana as private as possible may be extended to the point where it may be considered desirable to keep those who are under the influence of cannabis in their homes so that society is not offended by their possibly disruptive public presence.

It therefore must be decided what to do with "spree" users who go out in public. There are two roads to travel in dealing with this problem. Public intoxication may be considered a mere annoyance to society and therefore not punishable by law. If this option is taken, police should be directed to escort those who are intoxicated and offensive to their homes with no record being made of the incident.

The other option is to declare public intoxication a crime, and to punish all offenders. This route would appear to be more effective from the deterrence standpoint and thus more consistent with a desire to keep use as private as possible. The idea differs from most modern recommendations in regard to nonoffensive public intoxication from alcohol use because of the great difference in status between alcohol and cannabis.

The "taking home" or "protective custody" policies do not offer any substantial deterrence to public use, whereas the criminal treatment of public intoxication may be more consistent with a policy-maker's aims.

The problem with this approach is the difficulty associated with detecting intoxicated individuals. Cannabis intoxication, unlike that induced by alcohol, is not readily ascertainable through observation.

Moreover, even if a subject is identified no scientific test for cannabis intoxication has yet been developed. Such a test will probably be perfected in the not too distant future, but even then a subject may refuse to take such a test, as is his constitutional right.

In drunken driving cases a refusal usually leads to a hearing, and revocation of the operator's

permit for a period of time. This rule could easily be applied to driving under the influence of marihuana. But what sanction can be applied to someone publicly under the influence of cannabis? An automatic fine or incarceration for refusal to take the test would clearly be unconstitutional. A citizen walking the public streets does not thereby consent to be tested.

Also, since many states now require that public intoxication, at least from alcohol, must be combined with some form of disorderly conduct before it becomes a crime, a policy-maker would be bucking the modern trend by criminalizing mere public intoxication.

In these states, if an officer saw someone who appeared intoxicated in public, he could not even administer the test, because public intoxication would not be a crime in itself.

It therefore would seem most practical to recommend that public intoxication to the point of disorderly conduct be made criminal. This approach, while perhaps not the strongest means for keeping the user in his home, appears to be the next closest step; and it has the great virtue of practicality of enforcement. Of course, conduct under the influence of marihuana which constitutes a substantial and immediate danger to the safety of the subject, other persons or property could be dealt with more severely.

The disorderly approach would also be consistent with the trend toward reducing the great burden that public intoxication cases place on the criminal justice system. In addition, it would do away with the necessity for finding a sanction to be used against those who refused to take the test to determine public intoxication. A refusal would mean the officer's word against the defendant's as to disorderly conduct, so an intelligent arrestee would probably take the test unless he had a health reason for refusing. This, of course, would be an acceptable reason if it could be proven.

Driving Under the Influence of Marihuana

Driving a motor vehicle under the influence of cannabis should be a serious offense. Although cannabis may not be as disruptive as alcohol, it nevertheless does impair effectiveness to some degree. Of course, any realistic possibility of enforcement of the stricture depends on perfection of a test for determining if an individual is "under the influence of cannabis".

Assuming that such a test is developed, it will have to be used by police in the same manner in which driving under the influence of alcohol tests are used. This will require a reasonable method of administration with due regard for constitutional

rights and the safety of the individual. Should a suspect refuse the test he would be allowed to do so, but would become liable for suspension of his operator's permit for a considerable period of time.

Such tests have been subjected to considerable attack on various constitutional bases, but the Supreme Court has upheld them and defended the license revocation on the theory that all drivers implicitly consent to such tests when they apply for their operator's permits. *Schneider v. United States* (384 U.S. 757).

It would probably also be desirable to make any use of marihuana in a vehicle a criminal offense. Use would be defined as any smoking or ingesting of the drug. Permitting such use would run counter to the goal of keeping use private. In addition, the public safety hazard which results from driving under the influence would seem to require a ban on use while driving. The difficulties of enforcement would not be too great since detection could rest on officers' visual perception and sense of smell. On the other hand, where there is no evidence of actual use while driving, mere possession of the permissible amount should not be criminalized. As mentioned in the section dealing with possession in public, this last type prohibition would severely limit the benefits of the partial prohibitory scheme.

Intoxication and Criminal Liability

The extent to which criminal liability for other acts is affected by alcohol intoxication has been a major concern for many years. The growing potential for marihuana intoxication requires that a policy also be developed in that context.

There is no evidence that marihuana intoxication causes illegal acts, but it is certainly possible that some crimes will be committed under the influence. Generally, voluntary alcohol intoxication is no defense to a criminal charge; one who takes it upon himself to cast off restraints is responsible for his acts as a matter of public policy. It is also generally accepted, however, that where a particular mental state is required as an element of the offense, an individual may show that he was so intoxicated at the time that he could not possess that mental state. The effect of a successful plea of this type is to reduce the severity of the offense of which the defendant is guilty (e.g. murder to manslaughter).

This approach to the effect of intoxication has developed over many years and the evolution of the law suggests that a similar approach should be applied to marihuana intoxication. It can be argued, of course, that a rule of strict liability would conform more accurately to the desire to

have a strong symbol of disapproval. In addition, the current legal hiatus where marihuana is concerned offers an opportunity to employ a stricter approach to determine its impact on criminal conduct.

Civil liability presents a different issue. The purpose of civil tort law is primarily to determine who shall bear the unexpected cost of certain activity. Where damage is caused, *someone* must bear the cost; the question is whether the injured party must bear it alone or share it with the party who caused the injury.

Even if a marihuana user can show that his injury-causing conduct occurred solely as the result of intoxication, it is clear that he and not the injured party was in a better position to avoid any injury; he simply could have abstained from smoking.

Given these considerations it might be desirable to impose absolute liability on a person who caused damage to the person or property of others while "under the influence of marihuana."

This would dispense with the need for the plaintiff to prove difficult questions of negligence and causality. In other words, the risk of marihuana intoxication would rest entirely on the individual who engaged in the disapproved activity—use of the drug—which led to that condition. This would supplement the attempt to deter irresponsible use and to require all use to be private.

A slightly less onerous variation of this approach would be to classify intoxication as negligence per se but to require the plaintiff to prove causality. In other words, if a defendant's conduct were not otherwise negligent, and if it appeared that the damage did not occur because he was intoxicated then no liability would exist.

Age Limitations

Finally, there is the question of whether any possession of marihuana by persons below a certain age (for example, 16 years) should be permitted. It is clear that there would be a significant demand for such a limit based largely on the notion that whatever the ill effects of marihuana use they will be greater in the case of young people.

The problem with any decision to criminalize possession by persons under a certain age is that it is largely unenforceable and—because of a large degree of use among the young—would continue most of the problems associated with the present system. It would seem much more reasonable to treat marihuana possession and use by a person under 16 years as one factor in determining whether he is a child "beyond the control of his parents" or "in need of supervision" under statutes

currently on the books. It would not in itself be enough to treat the child as falling within these categories.

On the other hand, it would certainly be possible to impose stricter penalties for proscribed sales to persons under the age and even to proscribe casual transfers to them within the home, though there is little hope of enforcing the latter. This approach would satisfy those who desire an age limit without involving all the costly features of criminalization of private use and possession.

REGULATION

As marihuana use continues to increase and the illicit marketing system expands to meet the demand, the government may decide that a legitimate regulatory system for the production, distribution, and consumption is a preferable and profitable alternative to an irrepressible, illegitimate system.

This is not to say that the government would necessarily have to place itself in a position of condoning or commercializing use; as suggested above, the regulatory scheme could well be utilized to implement a policy discouraging use. The government would merely assume a role of "tolerating" marihuana use within legally defined parameters designed to protect society and the consumer.

To be effective, a marihuana regulatory system must make legitimate marihuana more attractive to the consumer than the illicit variety by providing certain advantages and benefits to the consumer which the black market does not offer. The first of these is quality control and purity.

For the protection of the consumer, a regulatory system should embody some mechanism for insuring that the product is in fact what it actually purports to be, without undesirable adulterants added to alter the effect. Potency is another concern of the consumer which regulation, with proper production supervision and controls, could assure.

The problem is to devise a system which would prevent consumption of a marihuana with such a high THC content that the health of users would be endangered, and yet would not be confined to a drug so impotent as to prevent achievement of the desired effect thereby driving users to illegal sources of supply.

The dilemma of determining proper potency is further compounded by the titration phenomenon and the varying degrees of psychological susceptibility to adverse reactions from person to person. Scientific evidence seems to indicate that experienced marihuana users have learned to

titrate their marihuana intake so that they can achieve the desired level of intoxication and, once there, stop intake; thus avoiding the discomfort or adverse reactions produced by too much THC. The experienced user thus has an internal mechanism for controlling intake and can probably handle even the more potent forms of marihuana with a minimum of problems.

In the case of the inexperienced user who has not learned the titration process, however, it is possible that adverse reactions occur more commonly. Much of this phenomenon might derive from set and setting, but potency of the drug clearly contributes. Theoretically, novice users might be allowed access only to low potency marihuana until they have learned to titrate, while regular users could obtain marihuana in higher potency ranges. Although impractical, such a limitation might insure adequate protection for the novice while at the same time keeping regular users within the legitimate market (not at all unlike the existent alcohol use phenomenon where most initiates begin with less potent forms such as beer and wine and then graduate to more potent beverages).

On the other side of the spectrum, a public health problem of major proportions could arise from a high incidence of long-term heavy use of potent preparations. It at all possible, a regulatory scheme must attempt to minimize, if not preclude, the availability of preparations with high THC content.

Another element required in any regulatory system is adequate availability and convenience in procurement. Unless adequate supplies of marihuana are available and obtainable with a minimum of inconvenience, the potential for black market marihuana increases sharply.

Here off-track betting offers a good example of the dangers in over-restriction of supply. Prohibition of off-track betting in those states permitting on-track paramutuel betting led to the establishment of huge gambling cartels to cater to the serious horse player who found it highly inconvenient, if not impossible, to travel regularly to a race track in order to place a bet. (Recently some states have legalized off-track betting under state controls and have set up betting offices which are accessible and convenient to use. While limited, illegal off-track betting may continue for persons wishing to maintain absolute anonymity, most experts feel that most of the huge "bookie" operations will turn to forms of gambling other than horse racing.)

Another parallel can be found in states which have sought to displace the "numbers" rackets by instituting state lotteries. These efforts have

been unsuccessful for a number of reasons pertinent here.

First, lottery drawings were at most monthly, whereas the numbers game is played daily. Second, state lottery odds were much higher. Third, and most important, obtaining lottery tickets is generally inconvenient to the person likely to play the numbers. In the numbers game the runner comes directly to the person who is placing the bet or is located in the neighborhood, whereas in state lotteries the player must go to an authorized bank or other such establishment. For 50 cents or a dollar a day, playing the numbers proves much more convenient to the average urban dweller than the state lottery.

The same logic applies to any marihuana regulatory system. This does not suggest the system should not incorporate a measure of inconvenience to insure that persons wishing to smoke marihuana have given it serious thought. The system, however, cannot be so stringent that purchase of the drug becomes overly inconvenient or impossible for the average consumer of marihuana.

Another element relevant to the success of any regulatory system is pricing. Marihuana, unlike many drugs, is simple and inexpensive to produce. If its retail price in the regulated market is exorbitant, consumers will simply turn to private illicit sources.

At the same time, the government may want to keep the price at levels higher than it would normally reach in order to discourage or at best not to encourage use; the ease and low expense involved in marihuana production could make it an overly attractive intoxicant. Government price control and tax aspects will be discussed in a later section.

The last element, and one which will be discussed in great detail under the distribution section, is that of uniformity. If any regulatory system is to be effective *ab initio*, there must be uniformity of regulation throughout the United States. This will most likely require a federal preemption of state legislative authority in the marihuana area based on the federal authority to regulate interstate commerce.

Supply

The supply portion of the regulatory model consists basically of two elements: the initial source of supply (domestic cultivation or importation) and the wholesale distribution system. At first glance, importation would appear to be the most suitable means of supply, since large quantities of moderate THC content marihuana are already under cultivation in foreign countries

while in the United States there is only the relatively low THC content marihuana growing wild. Importation, however, almost certainly costs more than domestic production, and also contributes its share to the United States' current imbalance of trade. Importation of marihuana could involve a significant amount of trade, amounting to at least three-quarters of a billion dollars for wholesale expenditures.

More important, under an importation system, production would be outside the purview of federal regulatory and enforcement agencies with the result that little or no supervision or potency control could be maintained. Potency would have to be determined at the point of entry into the United States, as opposed to the point of cultivation. The potential for diversion into illegitimate channels would also be greater under an import system due to the increased distances and the greater number of persons handling the shipments. The greater potential for diversion would require additional safeguards, involving additional expenses.

Although domestic production would entail a number of problems it seems preferable. The central issue with respect to domestic cultivation is who should be the cultivator. The overriding considerations here are adequate safeguards against diversion, effective mechanism for price control, and prevention of the growth of private interests wanting to promote use of the drug.

At first glance, the ideal producer would appear to be the Federal Government. Profit margins and product promotion would be of little concern and the diversion potential would be minimal. The area would be a new one for the government, however, and government-supply might invest the drug with too much respectability. (On the other hand, there is the precedent of state-controlled liquor stores.) Licensing a limited number of lawful producers offers an alternative to government cultivation, and sacrifices little in the way of production control.

This approach, in fact, is already authorized by the Comprehensive Drug Abuse Prevention and Control Act of 1970 which provides for the licensing of manufacturers of schedule I and II substances. (The Act would have to be broadened somewhat, to permit manufacture for general consumption.)

Under the Comprehensive Act, the manufacture of schedule I and II substances is limited to the smallest number of establishments capable of producing an adequate and uninterrupted supply for legitimate medical, scientific and industrial needs under adequately competitive conditions.

A similar standard could be established for marihuana, whereby the Federal Government

would license the smallest number of establishments capable of producing adequate and uninterrupted supplies for consumer use.

Other prerequisites to licensing could also be imposed, such as adequate safeguards against diversion within the plant facility, past experience in the production of controlled substances, and absence of any record of prior convictions under state and federal drug control laws.

Up to this point the discussion has focused mainly on marihuana's cultivation rather than its processing into a readily consumable form. With respect to the latter, assuming a non-government distribution system, the primary issue is retail price control. The government can control the retail price of marihuana directly by regulation, or indirectly by taxation. Taxation has the advantage of producing revenue for the government, while also reducing the degree of official involvement in marihuana's sale; it has the disadvantage of reducing government control over price. Direct regulation, on the other hand, enables the government to set a price high enough to inhibit use and low enough to preclude illegal marketing.

In a strict system of regulation, therefore, direct regulation of price would seem more desirable. Taxes could still be assessed, however, to prevent distributors from receiving windfall profits and thereby developing too strong an interest in maintaining the system of regulation in one rigid form.

Distribution

The second question relating to retail distribution is whether a completely new marketing system should be established or whether an existing one could be utilized. Many have considered using liquor stores as the retail distribution point for marihuana. While this has the advantage of adapting an already established, non-concentrated marketing system, there are a number of overriding disadvantages. First is that retail liquor distribution is entirely state-operated or regulated, and the state derives considerable revenue from payment of state and local taxes on liquor purchases. The revenue factor is one of the main incentives for states being willing to incur expenses in alcohol regulation or control.

However, if we are to assume federal preemption with respect to marihuana, presumably states will lose their authority to exercise local option and to impose taxes on marihuana. Thus, there will be little or no revenue incentive for states to undertake establishment of any kind of regulatory machinery. Even given the authority to tax, there would have to be some mechanism at the federal level to prevent overtaxation. Otherwise, state

taxes, compounded with federal taxes, might provide an economic attraction for illicit production.

Furthermore, taxation with respect to marihuana should serve primarily as a control device, and only incidentally as a revenue-producing device. Taxation at the state level would be oriented more toward revenue-production than to control.

Aside from the feasibility aspects, it is questionable whether liquor stores are the most appropriate retail outlets for marihuana. Especially if the regulatory system is designed to discourage or be neutral toward marihuana use, the scales clearly would be tipped in the direction of encouragement were marihuana marketed in the same manner as liquor.

A more feasible marketing system for marihuana would be the utilization of retail pharmacies which are already licensed by the Federal Government to dispense drugs and, after meeting any necessary prerequisites, could be licensed as retail marihuana distributors. This would meet the convenience of procurement test and insure adequate price competition in that pharmacies are quite numerous and evenly distributed in all areas of the country. In addition, pharmacies are already equipped to comply with such requirements as recordkeeping, order forms, inventories, and identification verification which might be required.

Having the pharmacy as the retailer also has another, most important advantage. A requirement that marihuana can only be purchased in a pharmacy will make the purchaser more conscious of the fact that he is consuming a potentially harmful drug. By utilizing this system of retail distribution, society might well avoid the substantial social costs engendered by alcohol regulation.

Consumption

The third, and perhaps most critical portion of the regulatory model, pertains to consumption and use of marihuana. In the past, society has usually controlled consumption and use of commodities in four basic ways: (1) Restrictions on who may obtain and use the commodity; (2) restrictions on the method of obtaining the commodity; (3) restrictions on the quantity of the commodity legitimately obtainable by the users; and (4) restrictions on the public use of the commodity. As with the case of alcohol, society will more than likely require utilization of all four forms of control for purposes of regulating marihuana consumption. It is at this level that the policy planner must carefully tailor the regulatory scheme to his chosen social policy.

Restrictions on Who May Obtain the Drug.

The first, and most obvious, form of this type of restriction is an age limitation. Virtually every right and privilege in contemporary society is conditioned on a person having lived a certain number of years (voting, ownership of property, ability to enter into contracts, attending public school, etc.).

In the case of marihuana, the public interest would demand that an age limitation be imposed as a criterion for limiting access and consumption similar to that imposed for alcohol.

There are two important rationales for an age limit under a regulatory scheme. First, children and adolescents probably run a higher risk than do adults of adverse psychological reactions to marihuana use. Second, the ultimate design of a regulatory scheme is to encourage an informed, rational choice as to whether to use the drug. Maturity is an essential prerequisite of such a choice.

In imposing an age restriction, the law operates in two ways: against the underage user and against the supplier. While enforcement against underage users has all the disadvantages and pitfalls of any prohibitory approach utilizing criminal sanctions, the leverage which a regulatory system gives the government against legitimate suppliers has a counterbalancing effect.

As discussed earlier, marihuana distribution will entail licensing as a condition precedent to engaging in business. Sale to underage persons under the consumption model would be made grounds of revocation of the license, and thus the right to conduct business. This sanction is probably the only one which will effectively deter unauthorized sales to persons under age.

Age restrictions can, of course, create an illicit market to supply persons underage who desire the drug. In the case of alcohol, minors have generally developed fraudulent methods to obtain the drug from legitimate outlets. However, the ease with which marihuana can be grown and produced suggests that the demand by underage persons desiring marihuana may instead be met by an illicit supplier. Moreover, the transition phase to a regulatory scheme would be crucial, and especially so in this area. Marihuana is a drug primarily of the young and many illegal suppliers already serve the underage market; under a regulatory system that outlawed their using marihuana, teenagers could simply continue to obtain it illegitimately.

What age should be made the cut-off point thus becomes a very complex question: too low and marihuana will be freely and legally available to many people who should not use it, and perhaps would

not otherwise use it; too high and many people might obtain the drug from illicit markets. Moreover, the proper age limit may vary from place to place, depending on prevailing patterns of use and community views regarding the age of maturity. Sixteen years, for example, might be appropriate in predominantly urban and suburban areas, while slower-paced regions might insist upon a higher limit.

The fact that the incidence of marihuana use increases significantly among 16-year-olds and then again at 18 suggests that either of these ages may be realistic. In this respect, setting the limit seems more properly an issue for state and local governments.

Restrictions on the Manner of Obtaining the Drug. This restriction relies on two factors to limit consumption: (1) inconvenience to the user and (2) harassment of the user.

Inconvenience is engineered commonly by restricting the numbers, location or business hours of retail outlets; but often such measures do not so much cut down on consumption as enhance the value of the distributor's license and enable him to reap "monopolistic profits."

A sensible system should have reasonably available outlets, proportional to the number of consumers and potential customers within a given locale. At the same time, the outlets should be more or less inconspicuous—at least with respect to the sale of marihuana. A formula on a per capita basis could be utilized (e.g. one retail outlet per 10,000 persons), as could the retail pharmacy, which is accessible in all locales but primarily associated with the sale of more wholesome items.

The location of these outlets is also relevant, since in the past society has attempted to restrict consumption by controlling the locations where the commodity is available. Again, the theory is that by isolating the outlet, purchase becomes overly inconvenient to the consumer. In reality, however, isolation of the outlets does not significantly deter most consumers. However, it can have the effect of stigmatizing the user (e.g. the potential embarrassment of being seen entering or leaving a pornography shop), forcing many of them to turn to more "discreet" sources for the commodity. Distributing marihuana through retail pharmacies would minimize embarrassment while still reminding the purchaser that he was taking a potent and possibly harmful drug.

With respect to harassment of the consumer, restrictions could require that all marihuana purchases be for cash, as opposed to negotiable instruments or credit cards. This is done by law in many

areas for many goods, particularly alcohol. This kind of deterrence can only be termed negligible; the user only has to get enough cash to make the purchase.

Restrictions on Quantity Obtained. The third type of restriction relevant to controlling consumption limits the amount of a commodity which can be sold to an individual at one time. This restriction generally takes the form of a limitation on the actual quantity which may be purchased and the time period between purchases. While there are many precedents for this type of restriction, such as sales of over-the-counter narcotic preparations, alcohol in some states, explosives, etc., none have been really effective. Enforcement in these instances is usually against the seller versus the user, but enforcement generally becomes impossible when the user simply moves from one retail outlet to another, until he obtains the quantity he desires.

Presumably similar quantity restrictions could be imposed on the purchase of marihuana. To be more effective, something such as a punch card could be issued to the user who would present it at the time of purchase. The card would be dated and punched in a manner denoting the quantity purchased (e.g. a ration card used in military post exchanges). Thus, he would not be able to purchase additional quantities of marihuana until the expiration of a specific period of time. However, even this approach has pitfalls in that the user desirous of additional quantities could always "beat the system" by borrowing a friend's ration card, or buying a second or third ration card on the black market.

In reality, it is doubtful whether any quantity restrictions are really necessary. Once marihuana is freely available with minimum inconvenience, the system may become self-policing in that most people will only care to purchase enough to meet their needs at any given time, whatever they may be, and no more. Stockpiling will no longer be necessary. Of course, there is always the chance that certain persons will stockpile large quantities to sell to persons underage or to bootleg after hours, but there are other more effective means for coping with these people than quantity limitations.

Restrictions on Public Consumption. Society, although willing to tolerate use of a commodity, sometimes restricts where and when that commodity can be used. A primary objective of this type of restriction is to protect public health and safety and to make conduct which may be offensive to certain elements of society less visible. Any attempt to reduce consumption by this means is ancillary to the primary objective.

Typical of this restriction are the numerous statutes and ordinances controlling the public consumption of alcohol. These are generally aimed at confining public consumption to areas specifically set aside for the purpose and, secondarily, reducing potential for overindulgence (only one drink permitted on the table at a time, prohibition against serving persons appearing to be intoxicated). It should be noted that this secondary objective of reducing consumption can rarely be achieved and really plays no relevant part in this discussion.

A number of problems would be raised by permitting public consumption of marihuana in restaurants, night clubs, etc., in a manner similar to alcohol. Assuming society would not want to commingle the consumption of marihuana with the consumption of alcohol, and assuming further that society would not want to permit on-the-premises consumption at the retail outlet, there would be very little profit motivation to undertake a business venture catering to persons wishing to use marihuana. In the case of alcohol the discotheques, bars and cabarets all derive a substantial portion of their net profits from liquor sales. (Without some commodity other than food or non-alcoholic drinks to market, it is doubtful whether a place for on-the-premises consumption of marihuana could even meet its overhead costs, much less make a profit. Thus, if such places are to be operated, federal subsidies, similar to those in Holland and Denmark, may be necessary to sustain them. Such subsidies in this country are highly unlikely.

Again, it should be noted that the foregoing is based on an assumption that alcohol and marihuana use would not be commingled. However, it may well be that medical experts would find no problems with permitting the use of marihuana on premises where alcohol is openly consumed. That being the case, one could reasonably permit marihuana use in any place where public alcohol consumption is allowed, subject, of course, to any public safety requirements.

It would be safe to assume under any public consumption model that society would also demand that other alcohol-type controls be imposed on marihuana. Consumption of marihuana in unauthorized places (streets, park, while driving, etc.) would be prohibited, as would driving under the influence of marihuana. The public intoxication and disorderly conduct statutes and ordinances would be given equal applicability to persons under the influence of alcohol or other drugs. Clearly, these types of control are to protect the public from possible harm and offensive behavior, *not* to reduce consumption.

PART IV

Implementation of Alcohol Prohibition

With the ratification of the 18th Amendment, American society adopted on a national scale a policy aimed at eliminating the distribution and ultimately the consumption of alcohol. Some states had adopted such a policy in the decades preceding the 18th Amendment, and the Federal Government had been inching toward this position for 10 years. The national policy was actually declared in the year 1919.

Whether or not its supporters thought that the elimination of alcohol consumption could actually be achieved, the rhetoric accompanying adoption of the 18th Amendment and the Volstead Act manifested their desire to do so. Nonetheless, the legal scheme chosen to implement eliminationist policy was not total prohibition, but rather a partial prohibition scheme.

The purpose of this part of the chapter is to summarize the legal status of possession for personal use during alcohol prohibition, first at the federal and then at the state level.

POSSESSION UNDER THE FEDERAL PROHIBITION LAWS

One of the initial problems encountered by the framers of the Volstead Act was that the 18th Amendment did not specifically prohibit possession of intoxicating beverages. The sponsors of the Act were anxious to remedy this defect.

In Senate Report Number 151, 66th Congress, 1st Session, August 18, 1919, they stated that it was essential that the Act forbid possession if the prohibition mandate of the 18th Amendment was to be fulfilled. In their opinion, a possession violation was required to help law enforcement officers enforce prohibition and to preclude the contention that a right to possess intoxicating beverages implied the right to buy them as well.

In emphasizing their intent that possession be illegal under the Act, the sponsors urged in the same report that:

Under a Constitutional Amendment which prohibits the manufacture of intoxicating liquor even for one's own use there can be no justification for permitting the possession of that which must be illegally manufactured or sold before it is possessed.

Possession was made illegal by Section 3, Title II of the Act which prohibited the manufacture, sale, exchange, transportation, importation, exportation, delivery, or possession of any intoxicating liquor except as otherwise authorized.

An exception was made for "authorized possession" because the Senate thought it had to protect the property rights of persons possessing liquor that had been legally secured prior to passage of the Act. Section 33 authorized the possession of such liquor so long as it was within a private dwelling for the personal consumption of the owner, his family or his *bona fide* guests. Although Section 33 excepted personal use of lawfully acquired liquor from the operation of the Act, it also placed the burden of proof on the possessor in any action to prove that any liquor he consumed was lawfully acquired, possessed and used.

Despite the express intent of Congress in formulating Sections 3 and 33 to forbid the possession of intoxicating beverages altogether, the courts ultimately vitiated the attempt to forbid personal use by liberally construing "authorized possession."

In 1920, the Supreme Court decided that lawful possession prior to passage of the Volstead Act was lawful possession even outside a dwelling. It held that retention of lawfully acquired liquor within a public, non-bonded warehouse, as long as the owner maintained exclusive possession and control of the liquor and used it for his personal consumption, was lawful possession. *Street v. Lincoln Safe Deposit Company*, 254 U.S. 88, 41 S.Ct. 31 (1920).

Soon thereafter, an appellate court decision undercut the burden of proof provision in Section 33. This section gave to a possessor the burden of proving lawful acquisition in any "action" concerning his liquor. The court in question held that the word "action" connoted a civil proceeding, not a prosecution and therefore that the burden of proof was on the defendant in civil cases only, and not in any criminal proceeding. *U.S. v. Cleveland*, 282 F. 249 (1922).

Instead of directly prosecuting possession cases, some federal prosecutors tried to get at possessors from different angles. They encountered difficulty at every turn.

As Section 3 did not prohibit the receipt or purchase of liquor even though its sale was illegal, courts balked at enforcing the proscription of sale against purchasers. Some innovative prosecutors charged purchasers with conspiracy. This charge was initially accepted, and in some jurisdictions resulted in convictions. *U.S. v. Vannatta*, 278 F. 559 (1922), *U.S. v. Slater*, 278 F. 266 (1922). However, most jurisdictions rejected this theory and in those where it was accepted, such prosecutions were rarely made.

Since purchase was not illegal and a conspiracy charge was likely to fail, another type of charge utilized in possession cases was "illegal transportation." Yet, there are no cases in which persons who

had purchased liquor *for their own consumption* were prosecuted for illegal transportation.

It seems strange, at first blush, that prosecutors thought they had to resort to such subterfuges. In light of its legislative history, the Congress clearly meant to render illegal the possession of liquor acquired subsequent to the effective date of the Act. Why then, did prosecutors refrain from bringing illegal possession cases before the courts?

Perhaps one clue is that in 1925 when such a possession case was finally prosecuted, the courts discarded the possession count under the theory that only possession for an illegal purpose was prohibited, and that sale, not personal consumption, was the only purpose made illegal by the Volstead Act. *Shoemaker's Petition*, 9 F. 2d 170 (1925).

In 1930, the question of a purchaser's liability for unlawfully and knowingly having purchased liquor was settled once and for all by the Supreme Court. The Court there held that a purchaser in a transaction of sale in no way violated the law even though the transaction in which he participated was prohibited. *U.S. v. Farrar*, 281 U.S. 624, 50 S.Ct. 425 (1920).

In view of this judicial gloss during the prohibition era, the federal law permitted:

(1) The consumption of lawfully acquired intoxicating beverages in one's own home.

(2) The purchase of intoxicating beverages for one's own consumption.

(3) And, for lack of enforcement against such activity, transportation for the purpose of personal consumption.

Although Congress had attempted in the Volstead Act to proscribe possession, the Act—as enforced and interpreted—prohibited only possession for unlawful purposes such as sale.

POSSESSION UNDER THE STATE PROHIBITION LAWS

Under state prohibition laws in effect during 1921,⁷ only five states (Georgia, Idaho, Indiana, Kansas and Tennessee)⁸ prohibited the possession of intoxicating beverages for personal use. In four

⁷ 1921 was selected as the cut-off date for this discussion for two reasons: (1) The Eighteenth Amendment was ratified by the thirty-sixth state on January 16, 1919, and became effective on January 16, 1920. The Volstead Act, passed on October 28, 1919, became effective simultaneously. Thus the states had had time to enact enforcement provisions by 1921. (2) At this early stage in Prohibition, when moral fervor was high, the state laws were probably as strict as they ever were during the Prohibition era.

⁸ It is interesting to note that Kansas, Georgia and Tennessee still have some form of county option prohibition today; and that Idaho permits liquor to be sold only through state stores.

of these states, excluding Indiana, the receipt of liquor as well as its possession was prohibited. Idaho and Kansas also had special enforcement provisions, permitting the warrantless search of private residences.

To the extent that the remaining 43 states prohibited "possession" in 1921, they aimed primarily at possession for the purposes of sale. Twenty-eight of these states literally included "possession" among their list of prohibited acts, but excepted possession for personal use. Thirteen did not prohibit "possession" alone, but instead prohibited "possession for the purpose of sale" or "possession in public." The remaining two states, Maryland and Massachusetts, had no prohibition laws at all at this time.

In addition to limiting possession in these ways, 18 states also included "receipt" or "purchase" among the acts prohibited by law. These states did not intend to penalize possession as a result, however, for all 18 of them used one or more exceptions to permit the possession of liquor for private consumption. Indeed, two expressly permitted the receipt of one gallon for personal use.

The 43 states permitting possession of intoxicating beverages for personal use designed their statutory schemes to focus on sale in at least one of the following ways:

1. An express declaration in the text of the state prohibition law to the effect that (a) only possession for the purpose of sale was unlawful, or (b) only public possession was unlawful (that is possession in a restaurant, resort, bar, store or similar place).

2. An express exception for possession of a limited amount of spirituous, vinous or malt liquors for personal use.

3. An express exception for the possession for personal use of home-brewed wine, beer or cider.

4. An express exception for liquor kept and consumed in a private dwelling for use by its owner, his family, or their *bona fide* guests.

5. An implication from the general structure of the prohibition law that possession in a private dwelling was not precluded; for example, a presumption that possession in places other than private dwellings was *prima facie* evidence of sale combined with the absence of differential penalties for possession and sale.

6. An express refusal to permit the issuance of search warrants for the search of private residences without evidence of a sale.

7. A refusal to cooperate with Federal Prohibition altogether, or the failure to enact state enforcement laws.

Each of these statutory schemes will be reviewed below.

"Possession" Offense Covered Only Possession for Sale or Possession in Public

Thirteen states used this approach. Ten of these prohibited only possession for the purposes of sale, and three prohibited possession in a public place. None of these states prohibited the receipt of liquor except, of course, receipt for the purposes of sale. In one of the states (Washington), "possession" was defined judicially rather than legislatively.

Express Exception for Possession of Small Amounts

Ten states enacted such exceptions. Two of these (Iowa and Nebraska) permitted an amount of liquor "sufficient for one's reasonable needs," or "quantities insufficient for sale." In one of these two states (Iowa), the exception was eliminated in 1925.

Express Exception for Home-Brewed Beverages

Ten states enacted such exceptions. One of these 10 (Michigan) permitted the home manufacture for personal use of cider only.

Express Exception for Possession in a Private Dwelling

Twenty-one used this, by far the most common approach. In five of these states, possession of liquor kept within a private dwelling for personal use was lawful only if it had been acquired prior to the passage of the state prohibition law. Three additional states in this category required that the liquor so possessed be "lawfully acquired." Only one of these three (Wisconsin) prohibited the receipt or purchase of liquor, leaving the meaning of "lawful acquisition" in the other two states in doubt.

Significantly, 13 states did not specify whether or not the liquor kept in a private home had to be lawfully acquired for its consumption there to be legal. Of these 13, five did in fact prohibit purchase, but one of these (South Carolina) permitted the purchase of one gallon of wine for personal use.

Implied Exception for Possession in Private Dwelling

In 12 states a private dwelling exception was established by implication. In three of these states (Arizona, Texas, and Utah) the statutory implication was quite clear since it was required that

any liquor in possession be acquired before the effective date of the state prohibition law.

Limitations on Searches of Private Dwellings

Seven states took this approach. A provision prohibiting the securing of search warrants for private residences rendered it virtually impossible for enforcement officials to enforce prohibition against private use in a home. Moreover, in only three of these states (Colorado, Pennsylvania, and Rhode Island) was this the only exception accorded possession.

Resistance to Prohibition

Six states resisted the idea of prohibiting possession of intoxicating beverages altogether. Maryland enacted a law in 1921 permitting the license for sale of liquor 3.5% alcohol by volume. Massachusetts enacted a law permitting the sale of 2.75 beer at about the same time. New York resisted the enactment of any state prohibition law until the end of 1921, then repealed its 1921 law in 1923. Rhode Island was the last state to ratify the 18th Amendment and contested its passage as an invasion of state sovereignty. South Dakota apparently had no prohibition law in 1921. Wisconsin vigorously contested the 18th Amendment and the Volstead Act.

Of these states, those (Maryland and South Dakota excepted) which ultimately adopted prohibition acts merely copied the Volstead Act in its entirety.

TECHNIQUES UTILIZED TO EXEMPT POSSESSION FOR PERSONAL USE

Category 1(a)		
[States which prohibited possession for purpose of sale only]		
Connecticut	New Hampshire	
Delaware	New Jersey	
Illinois	Texas	
Maine	Washington	
Minnesota	Wyoming	
Total		10
Category 1(b)		
[States which prohibited public possession]		
Arkansas	Nevada	
California		
Total		3
Category 2		
[States which permitted possession of small amounts]		
Connecticut	Nebraska	
Delaware	North Carolina	
Florida	Oklahoma	
Iowa	South Carolina	
Mississippi	Texas	
Total		10

Category 3		
[States which permitted home brew of wine, beer or cider]		
Alabama	Mississippi	
Delaware	Nevada	
Illinois	South Carolina	
Louisiana	Virginia	
Michigan	West Virginia	
Total		10
Category 4		
[States which had an express private dwelling exception]		
Florida	North Carolina	
Illinois	North Dakota	
Kentucky	Ohio	
Louisiana	Texas	
Missouri	Vermont	
Montana	Virginia	
Nebraska	Washington	
New Hampshire	West Virginia	
New Jersey	Wisconsin	
New Mexico	Wyoming	
New York		
Total		21
[If acquired before enactment of prohibition law]		
Florida	Texas	
New York	Vermont	
North Dakota		
Total		5
[If lawfully acquired]		
Louisiana	Wisconsin	
Missouri		
Total		3
Category 5		
[States which had an implied private dwelling exception]		
Arizona	Minnesota	
Arkansas	Nevada	
California	Oklahoma	
Connecticut	Oregon	
Delaware	Texas	
Michigan	Utah	
Total		12
Category 6		
[States which refused search warrant for private dwelling]		
Arizona	North Dakota	
Colorado	Pennsylvania	
Maine	Rhode Island	
Michigan		
Total		7
Category 7		
[States which actively resisted State prohibition]		
Maryland	Rhode Island	
Massachusetts	South Dakota	
New York	Wisconsin	
Total		6
[States which prohibited receipt or purchase]		
Alabama	North Carolina	
Georgia	Ohio	
Idaho	Oklahoma	
Kansas	Oregon	
Michigan	Tennessee	
Mississippi	West Virginia	
Montana	Wisconsin	
Nebraska	Wyoming	
Total		16
[South Carolina—1 gallon wine, 1 quart liquor excepted. Washington—1 gallon excepted]		
Total		2

In the succeeding pages are summaries of each of the 48 state prohibition laws as they applied to possession for personal use. Charts summarizing this data have also been prepared.

STATUS OF POSSESSION UNDER STATE PROHIBITION LAWS

These summaries are impressionistic only because many of the state prohibition laws were exceedingly complex covering 50 pages or more in the statutory codes.

1. **Alabama.** The 1915 law prohibited manufacture, advertisement and sale of intoxicating beverages. While personal use at that time was not expressly unlawful, "it [was] the public policy of the state to discourage use and consumption of prohibited liquors." The Alabama Act of 1919 expressly prohibited mere possession or receipt of said liquors, excluding, however, the possession of five gallons of wine per family per year for domestic use, providing the fruit for such wine was grown and the wine itself extracted on the family's premises.

2. **Arizona.** The Arizona laws prohibited the possession of liquor unlawfully received from or introduced into the state from outside the state (the exact words of the law being "it shall be unlawful to have in possession" any of such liquors). Under state law and practice, however, search warrants for private residences would issue only upon evidence of a "purchase". Therefore, the laws against "possession" could be enforced against persons in private dwellings only if occupants consented to search or if the police had probable cause to believe the dwelling was being used for the sale of intoxicating beverages. In addition, the Arizona law did not render illegal the use of liquor acquired within the state or liquor in the possession of the user at the time of its enactment.

3. **Arkansas.** The Arkansas Bone Dry Laws of 1915 and 1917 prohibited the receipt and possession of intoxicating beverages in any of the following places: "fruit stand, drug store, store, club or club room, stable, public garage, public park, hotel rooming house, dining room, wagon yard or in any public building." Hence, by implication, possession in a private dwelling place for personal use was not prohibited.

4. **California.** In 1921 and 1922, California enacted the Wright Act in order to enforce the 18th Amendment. This Act forbade possession of intoxicating beverages in a public or semi-public place. Secondary sources consulted by the Commission did not include the exact text of the California Prohibition Law. However, insofar as "public" possession was expressly prohibited, pri-

vate possession seems to have been permitted by implication.

5. **Colorado.** The Colorado Prohibition Law prohibited the possession of intoxicating liquors "for personal use or otherwise." It also made it unlawful for an individual to permit anyone else to "use intoxicating liquors on any premises owned or controlled by him." In spite of these prohibitions, the law expressly provided that no warrant would be issued to search a home occupied as such, unless some part of it was connected with a store, rooming house or public resort. The law against possession for purely personal use was therefore unenforceable. As if in recognition of this anomaly, the 1917 legislation required persons desiring to keep liquors in their homes for medicinal or other "lawful" purposes to secure permits as was required of druggists or other persons entitled by profession to deal in medicinal or sacramental liquors.

6. **Connecticut.** The 1921 Connecticut Prohibition Law only proscribed possession in contemplation of sale. Consistent with the possession law, no search warrants would issue for search of a private dwelling place except upon the affirmation of the officer desiring the search that a sale had occurred there within the month prior to his complaint. Indeed, the law implied that a person could lawfully transport a certain amount of liquor for his personal use, but not in excess of five gallons at any one time.

7. **Delaware.** Although in 1919 Delaware law prohibited the "furnishing" of liquor, it did not expressly preclude the possession of liquor. In fact, the law expressly permitted individuals to produce their own wine or cider for private consumption and to carry with them one quart of spirituous liquor or one dozen pint bottles of malt liquor for private use.

8. **Florida.** Florida expressly prohibited possession, except possession of not more than four quarts of distilled liquors and twenty quarts of malt liquors provided such excepted liquors were obtained prior to the enactment of the Florida Prohibition Law. The burden of proof was on the party claiming his possession was lawful to show that it came within the statutory exception.

9. **Georgia.** The Georgia Bone Dry Law of 1919 prohibited both possession and receipt of any intoxicating beverages. It expressly repealed a prior provision which exempted the social serving of such beverages in private residences in ordinary social intercourse.

10. **Idaho.** In Idaho, the mere possession or receipt of intoxicating liquor, with the exception of pure alcohol for medicinal or scientific purposes acquired in compliance with a court permit, was a

crime strictly enforced by special search and seizure provisions (permitting search of any premises without a warrant) and confiscation of vehicles used in the transport thereof. The constitutionality of the "illegal possession" provision of the law was tested in the State Supreme Court and appealed to the United States Supreme Court; in each case its constitutionality was upheld.

11. **Illinois.** The Illinois enforcement code of 1921 superseded a local option law and prohibited possession only for the purpose of sale. It expressly affirmed the lawfulness of possession of liquor in a private dwelling for the use of the owner, his family and his *bona fide* guests. However, a person who carried liquor on his person was guilty of a nuisance and was restrainable by law. Persons manufacturing cider or fruit juices (presumably converting them into wine) in their own homes were explicitly exempted from the penalties of the law so long as such manufacture was purely for personal use.

12. **Indiana.** The Indiana Prohibition Law of 1921 explicitly prohibited possession *per se* of intoxicating beverages. Under its 1918 law the manufacture of wine and cider for personal use was permitted. This exception was eliminated in 1921.

13. **Iowa.** In 1917, the Iowa law merely prohibited the keeping of liquor in unusual quantities (presumptively with the intent to sell them) in a private dwelling house. In 1925, a later law prohibited possession altogether. The 1925 law gave officers a mandate to search residences for liquor regardless of the small amount involved. Moreover, the evidence of illegal possession of intoxicating liquors procured from such searches was admissible even if obtained by officers who lacked probable cause to make them.

14. **Kansas.** The 1917 Kansas bone dry law prohibited the possession or receipt of intoxicating liquors even for personal use. Police officers or other municipal officials with knowledge of violations of the use provisions were directed by law to inform the city attorney and were required to testify and to name witnesses to such unlawful use.

15. **Kentucky.** The 1920 Kentucky Prohibition Law, enacted by state constitutional amendment, expressly declared that nothing therein should be construed to make the possession of liquor unlawful by persons using the same in their private dwellings for themselves or their *bona fide* guests as long as such dwelling was occupied and used as a dwelling only. In addition individuals were permitted to move their stores of liquor to new dwellings upon securing the proper permit. The state courts had held unconstitutional an earlier Kentucky law forbidding possession for personal use.

16. **Louisiana.** The Prohibition Law enacted

by Louisiana outlawed possession except possession of intoxicating liquors in private dwellings, provided such liquors were legally acquired and for consumption of the owners or of their *bona fide* guests. In addition, the law permitted householders to brew beer and ferment wine for their personal use.

17. **Maine.** The Maine law was fairly complex. In substance it forbade possession with intent to sell. The search of a private dwelling for liquor was prohibited unless the dwelling was used as an inn, restaurant or shop, unless drunk and disorderly conduct occurred within, or, unless the magistrate was satisfied that liquor was secreted there for purposes of unlawful sale. The law expressly permitted the search of one's person if there was reason to believe that intoxicating beverages for the purpose of sale were hidden there. Transportation of liquor was prohibited for any purpose without a permit and the manufacture of cider was permitted only if preservative was added to prevent fermentation.

18. **Maryland.** Maryland enacted prohibition legislation to enforce federal law. In Baltimore the legislature set up a board to license sale of liquor less than 3.5% alcohol by volume. No licenses were issued under this law because of the apparent conflict with the Constitution.

19. **Massachusetts.** In 1929 the Massachusetts legislature enacted a law prohibiting sale of intoxicating beverages with the exception of 2.75% beer. In 1921 the State House of Representatives attempted to harmonize Massachusetts law with federal law. The Senate, however, declared the resulting law unconstitutional and the dispute was referred for settlement to the Massachusetts Supreme Court. In fact, it appears that Massachusetts never adopted a prohibition law. A judicial decision indicates that only possession for the purpose of sale was prohibited there.

20. **Michigan.** The Michigan laws of 1919 and 1921 prohibited both receipt and possession of intoxicating beverages. They also provided, however, that no warrant would issue to search a private dwelling unless part of such dwelling was used as a shop or hotel, or unless it was used for the unlawful manufacture and sale of intoxicating beverages. In fact, the law implied that mere possession and use within such a dwelling was not unlawful, because possession and use elsewhere was by law *prima facie* evidence of sale. The law did not prohibit the manufacture of cider.

21. **Minnesota.** The Minnesota law of 1921 did not prohibit possession for consumption, but only possession for transportation or sale. It also prohibited receipt of liquor except in cartons clearly labeled as such.

22. **Mississippi.** Mississippi was the first state to ratify the Eighteenth Amendment. Statewide prohibition had been in effect there since 1909. The state law declared that it was "unlawful to have intoxicating beverages in possession for the purpose of violating the law". In 1916 the legislature provided that the possession or receipt of more than one half gallon of vinous liquor, three gallons of malted liquor or one quart of spirituous liquor, or more than one of the above categories of liquor within any 15 consecutive day period was a violation of the law. In addition to permitting this individual ration of liquor, the state courts decided that brewing of wine in the home was not unlawful.

23. **Missouri.** The 1921 Missouri law proscribed possession, but excepted possession in the private residence of the owner thereof when such liquor had been lawfully acquired and was being lawfully used.

24. **Montana.** The 1921 laws of Montana contained a provision prohibiting possession of intoxicating beverages which provision was to be "liberally construed to the end that the use of intoxicating liquors as a beverage be prohibited." Nevertheless, a later section of the same act permitted possession of such beverages by individuals in a private dwelling for their own use or for the entertainment of their *bona fide* guests, as long as said individuals could prove that the liquor was lawfully acquired. The receipt of liquor was prohibited except by persons holding special permits and except where the liquor itself was clearly labeled as such.

25. **Nebraska.** The Nebraska law used a unique approach to the regulation of possession within private homes. The law stated that a person could not maintain more liquor in his dwelling place than necessary for his reasonable needs. Although possession was allowed by law, possession in and of itself was nonetheless *prima facie* evidence of unlawful possession in the event an action was brought under the provisions of the Act for unlawful use. Therefore, under Nebraska law a person was secure within the privacy of his house only if no one entered and reported the size of his personal liquor inventory. Receipt of intoxicating beverages except for medicinal, scientific, mechanical or sacramental purposes was prohibited.

26. **Nevada.** In 1918 Nevada passed a prohibition initiative. The state legislature attempted to amend it, but the Supreme Court held that any amendment would be invalid until three years had passed from the date of the initiative's adoption. We do not have any evidence that new amendments were in fact introduced in 1921. In any event, the Nevada law of 1918 prohibited the pos-

session of liquor in a public place. By implication, possession in a private dwelling was not precluded. The production of wine or cider for personal consumption was also not prohibited.

27. **New Hampshire.** The 1921 New Hampshire law punished the possession of liquor only if in sufficient quantity to give rise to a presumption of sale. It, however, prohibited the "furnishing" or "giving away" of any intoxicating liquor except in a private dwelling which was used as such and not, for example, as a resort. The mere receipt of intoxicating liquor was never prohibited.

28. **New Jersey.** The New Jersey enforcement code of 1921 provided that it was unlawful to possess liquor in a private dwelling except lawfully acquired liquor for the use of the owner, his family or his *bona fide* guests. It was unlawful to carry liquor on one's person regardless of whether or not the liquor so carried was destined for personal use. The New Jersey code was declared unconstitutional insofar as it provided for the imprisonment of offenders without jury trial.

29. **New Mexico.** In 1927, New Mexico prohibited the possession of intoxicating liquors in a private dwelling except for liquor possessed prior to February 1, 1920. In contrast, the 1919 law of New Mexico exempted possession of liquor in private dwellings from the operation of its prohibition provisions without requiring that possession be effected prior to the date of these provisions. One can only wonder what was the status of possession in the interim.

30. **New York.** The 1921 enforcement code of New York permitted the storage and removal of lawfully acquired liquor for personal consumption by the owner thereof, if such liquor was acquired prior to January 17, 1920. However, in 1923 this law was repealed, while the state jostled with the courts concerning its responsibility, if any, in the enforcement of federal law.

31. **North Carolina.** North Carolina enacted prohibition prior to the adoption of the 18th Amendment. Under North Carolina's Bone Dry Laws, purchase of intoxicating liquor was deemed unlawful and buyers were usually charged with the offenses of transportation and possession. The text of the 1923 Bone Dry Law was not available, but it was modelled on the National Prohibition Act and doubtless permitted possession of any liquor acquired prior to passage of the Act for personal use in a private dwelling. Prior to 1923, the receipt of one quart of spirituous or vinous liquor and five gallons of malt liquor was permitted; the possession at any one time of one gallon of spirituous liquor, three gallons of vinous liquors and five gallons of malt liquors was also lawful.

32. **North Dakota.** Although North Dakota had adopted prohibition legislation in 1889, its laws were modified in 1923 to bring them into accord with the Volstead Act. Possession of intoxicating liquors was prohibited, with the usual exception for liquor acquired before February 1, 1920 and possessed for use in a private home. The purchase or receipt of intoxicating beverages was not separately proscribed. The laws permitted the manufacture and distribution of sweet cider if, and only if, preservative was added thereto to prevent fermentation. It should be noted here that states such as North Dakota which adopted the National Prohibition Act generally adopted as well the federal rule that search warrants would not issue for search of private dwellings without evidence that such dwellings had been used to effect sales. In essence, therefore, the laws against possession were only enforced against private users when transport, sales, or manufacture of intoxicating beverages were investigated.

33. **Ohio.** The Ohio enforcement code prohibited the possession and receipt of intoxicating beverages; however, possession within *bona fide* private dwellings was expressly exempted.

34. **Oklahoma.** The Oklahoma Bone Dry Law was enacted in 1917. It provided that both possession and receipt were offenses, and in particular that the possession of liquor acquired by gift was unlawful. The law, however, by implication permitted the possession of one gallon of vinous, spirituous or malt liquor, the possession alone of less than this amount being insufficient to sustain a finding of unlawful intent.

35. **Oregon.** Under the 1921 Oregon Prohibition Law, the presence of liquor in places other than private dwellings was *prima facie* evidence that such liquor was possessed "in violation of the law," thereby implying that possession of liquor within a private dwelling was not unlawful. The law strictly prohibited the purchasing part of the transaction of sale, rendering it a crime to receive or purchase intoxicating liquor for anyone other than members of certain excepted categories of people for certain excepted uses (e.g., a druggist for medicinal purposes). The most unique provision of the Oregon law, however, was the specific exemption for the use and storage of intoxicating liquors aboard seagoing vessels.

36. **Pennsylvania.** The 1923 laws of Pennsylvania prohibited the possession of intoxicating liquor. However, search warrants would not issue for the search of private dwelling places without either evidence of sale or evidence that the dwelling place also served as a shop, restaurant, or other public facility.

37. **Rhode Island.** Rhode Island went to court to contest the passage of the 18th Amendment as an invasion of its states sovereignty and as contrary to the wishes of its population. Nonetheless, in 1922 it passed a law following the National Prohibition Act. Although it thereby prohibited possession, officers were not permitted to acquire search warrants for private residences without evidence of sale. Thus, in yet another state, the consumption of liquor in man's "castle" might have been unlawful, but it was an unreachable violation of the law.

38. **South Carolina.** The South Carolina Act of 1917 permitted the processing and possession of grape or berry wines grown on an individual's own land for his private purposes. In addition, it permitted the possession of any liquors "now on hand" (whatever that may mean). Moreover, by virtue of an earlier law, any person over 21 was allowed to possess, receive or transport, within any one month, one quart of alcohol for his own use and not more than one gallon of wine for religious purposes.

39. **South Dakota.** In 1917, South Dakota outlawed the receipt of intoxicating liquor. It also prohibited the manufacture or importation of liquor for personal ("beverage") purposes. It seems, however, that South Dakota did not enact a specific law enforcing the Volstead Act or prohibiting possession.

40. **Tennessee.** The Tennessee Prohibition Law of 1919 criminalized possession and receipt of alcohol whether or not for personal use. Moreover, it provided that possession in and of itself wherever found was evidence of unlawful possession. In 1923, the manufacture and transportation of liquor for personal use was specifically outlawed.

41. **Texas.** Texas prohibited the possession or receipt of intoxicating liquor for the purpose of sale, possession of more than one quart of any type of intoxicating liquor being *prima facie* evidence of possession with intent to sell. The law did not, however, prohibit the possession for use by an owner, his family and their *bona fide* guests of liquor purchased before the law went into effect.

42. **Utah.** The Utah laws of 1917 explicitly prohibited possession of alcoholic beverages. These laws provided that retail and wholesale liquor dealers had ten days after the effective date of the act to remove their liquor inventory from Utah. By implication, it would seem that private individuals were allowed to retain any liquor held at the time the laws were passed.

43. **Vermont.** The Vermont Prohibition Law forbade possession but excluded possession of liquor placed in a private dwelling prior to Jan-

uary 16, 1920. The law prohibited the import of liquor but did not outlaw receipt or purchase generally.

44. **Virginia.** The 1916 Virginia law provided that possession of alcohol by any person other than at his permanent *bona fide* home would be unlawful unless the alcohol was provided by a person (for example a physician) authorized to administer the same. The manufacture of wine and cider in the home was not prohibited. In addition, the law expressly provided that in no event would mere possession of intoxicating beverages be a felony, thereby distinguishing, as most states did not, penalties for possession from those for sale.

45. **Washington.** The Washington law of 1919 made unlawful the "furnishing" or possession of intoxicating beverages with intent to furnish them to another, except within a private residence. It also prohibited the possession or transport of more than one-half gallon of anything other than beer or of twelve quarts of beer. The penalties under this law, however, applied only to possession with intent to sell, barter or exchange, and the state Supreme Court held that only possession for sale was thereby prohibited.

46. **West Virginia.** The West Virginia Prohibition Law of 1921 prohibited the possession, transport and purchase of any amount of intox-

icating liquor. However, the law nonetheless permitted the personal and social use of intoxicating liquor in one's own home and the manufacture of fruit wine and cider from fruit grown within the state.

47. **Wisconsin.** Wisconsin was a local option state until 1918 and permitted sale of 2.5% alcohol by volume until 1921. The brewing interests fought the 18th Amendment in the courts and the Governor stated that he thought not only that the 18th Amendment was improper but also that the Volstead Act was an improper implementation of that Amendment. Nevertheless, the Wisconsin Prohibition Law conformed to the National Prohibition Act. It prohibited possession except for liquors lawfully acquired "for private use" and kept in the owner's private dwelling for use by his family and his *bona fide* guests. Possession other than in a private dwelling was *prima facie* evidence of sale. The purchase of intoxicating liquors was also prohibited.

48. **Wyoming.** The Wyoming law of 1920 basically prohibited possession for sale. Possession in a private dwelling for the use or personal consumption of its occupants and their *bona fide* guests while therein was lawful and did not have to be reported. The purchase or receipt of liquor without a permit, however, was prohibited.

DID STATE PROHIBITION LAWS FORBID POSSESSION FOR PERSONAL USE?

AS OF 1921

	Prohibitions			Exceptions								Penalties for possession different from sale
	1 States which made possession unlawful except on	2 Possession for purposes of sale unlawful	3 Receipt, Purchase or acquisition unlawful	4 Medicinal-exception	5 Express exception for personal use in private dwelling	6 Implied private dwelling exception	7 Liquor acquired before prohibition sale	8 No search of private dwelling w/o evidence of sale	9 Possession of small amount excepted	10 Home brew of cider or wine excepted	11 No prohibition law	
ALABAMA	Yes	Yes*	Yes	Yes						5 gals.		No
ARIZONA	Only if imported	Yes*	No	Yes		Yes	Yes and X ⁽¹⁾	Yes				No
ARKANSAS	Only if public	Yes*	No	Yes		Yes						No
CALIFORNIA	Only if public	Yes*	No	Yes		Yes						?
COLORADO	Yes	Yes*	No	Yes				Yes				No
CONNECTICUT	No	Yes	No	Yes		Yes			5 gals.			No
DELAWARE	No	Yes	No	Yes		Yes			1 qt. spirits			No
FLORIDA	Yes	Yes*	No	Yes	Yes		and X ⁽¹⁾		4 qts. spirits 20 qts. malt	Yes		No
GEORGIA	Yes	Yes*	Yes	Yes								No
IDAHO	Yes	Yes*	Yes	Yes								No
ILLINOIS	No	Yes	No	Yes	Yes					Yes		No
INDIANA	Yes	Yes*	?									No

	Prohibitions			Exceptions								11	12
	1 States which made pos- session unlaw- ful subject to exception	2 Possession for purposes of sale unlawful	3 Receipt, Purchase or acquisition unlawful	4 Medicinal- sacramental exception	5 Express excep- tion for personal use in private dwelling	6 Implied private dwelling exception	7 Liquor acquired before prohibition sale	8 No search of private dwelling w/o evidence of sale	9 Possession of small amount excepted	10 Home brew of cider or wine excepted			
IOWA	Yes	Yes*	No	Yes					Reasonable needs			No	
KANSAS	Yes	Yes*	Yes	Yes								No	
KENTUCKY	Yes	Yes*	No	Yes	Yes							No	
LOUISIANA	Yes	Yes*	No	Yes	Yes		X (2)			Yes		No	
MAINE	No	Yes	No	Yes				Yes				No	
MARYLAND	No	No	No								X	No	
MASSACHUSETTS	No	No	No								X	No	
MICHIGAN	Yes	Yes*	Yes	Yes		Yes		Yes		Only cider		No	
MINNESOTA	No	Yes	ok if labeled	Yes		Yes						No	
MISSISSIPPI	Yes	Yes*	Yes	Yes					1/2 gal. wine 3 gal. malt liquor 1 qt. spirits			No	
MISSOURI	Yes	Yes*	No	Yes	Yes		X (2)					No	
MONTANA	Yes	Yes*	Yes	Yes	Yes							No	
NEBRASKA	Yes	Yes*	Yes	Yes	Yes				Reasonable needs			No	
NEVADA	Only if Public	Yes*	No	Yes		Yes				Yes		No	

	Prohibitions			Exceptions								Penalties for pos- session different from sale
	1	2	3	4	5	6	7	8	9	10	11	12
	States which made pos- session unlaw- ful subject to exception	Possession for purposes of sale unlawful	Receipt, Purchase or acquisition unlawful	Medicinal- sacramental use exception	Express excep- tion for personal use in private dwelling	Implied private dwelling exception	Liquor acquired before prohibition sale	No search of private dwelling w/o evidence of sale	Possession of small amount excepted	Home brew of cider or wine excepted	No pro- hibition law	
NEW HAMPSHIRE	No	Yes	No	Yes	Yes							No
NEW JERSEY	No	Yes	No	Yes	Yes							Yes
NEW MEXICO	Yes	Yes*	No	Yes	Yes							No
NEW YORK	Yes	Yes*	No	Yes	Yes		if X ⁽¹⁾					No
NORTH CAROLINA	Yes	Yes*	Yes	Yes	Yes				1 qt. spirits or wine 5 gals. malt		Repeated in 1923	No
NORTH DAKOTA	Yes	Yes*	No	Yes	Yes		if X ⁽¹⁾	Yes				No
OHIO	Yes	Yes*	Yes	Yes	Yes							No
OKLAHOMA	Yes	Yes*	Yes	Yes		Yes			1 gal. wine spirits or malt			No
OREGON	Yes	Yes*	Yes	Yes		Yes						No
PENNSYLVANIA	Yes	Yes*	No	Yes				Yes				No
RHODE ISLAND	Yes	Yes*	No	Yes				Yes				No
SOUTH CAROLINA	Yes	Yes*	1 gal. wine okay	Yes					1 qt. alcohol 1 gal. wine	Yes	Law contested	No
SOUTH DAKOTA	?	?	?	?							?	No
TENNESSEE	Yes	Yes*	Yes	Yes								No

Prohibitions			Exceptions								
1	2	3	4	5	6	7	8	9	10	11	12
States which made possession unlawful subject to exception	Possession for purposes of sale unlawful	Receipt, Purchase or acquisition unlawful	Medical-sacramental exception	Express exception for personal use in private dwelling	Implied private dwelling exception	Liquor acquired before prohibition sale	No search of private dwelling w/o evidence of sale	Possession of small amount excepted	Home brew of cider or wine excepted	No prohibition law	Penalties for possession different from sale
TEXAS	No	Yes for sale	Yes	Yes	1 qt. and	X ⁽¹⁾		1 qt.			No
UTAH	Yes	Yes*	Yes		Yes and	X ⁽¹⁾					No
VERMONT	Yes	Yes*	Yes	Yes		X ⁽¹⁾					No
VIRGINIA	Yes	Yes*	Yes	Yes					Yes		No
WASHINGTON	No	Yes ^{1/}	1 gal. okay	Yes							No
WEST VIRGINIA	Yes	Yes*	Yes	Yes					Yes		No
WISCONSIN	Yes	Yes*	Yes	Yes		X ⁽²⁾				Law contested	No
WYOMING	No	Yes	Yes	Yes							No

Notes to Chart

- ^{1/} judicial interpretation
 * implied by law
 X⁽¹⁾ acquired before a specific date
 X⁽²⁾ lawfully acquired
^{2/} exception eliminated in 1925

LEGEND

The columns on this chart correspond to the categories in the preceding lists and the substantive discussion in the following manner:

Substantive Category		Chart Column		Symbol	
1a	1b	1	2		Public
2	3	9	10		Yes
4	5	7	8		Yes
6	7	6	8		Yes
7	11	11			Yes

This chart also makes a point not included in the discussion. Column 5 clearly indicates that virtually every state permitted the receipt of liquor for medicinal and sacramental purposes. It is not surprising that in practice these exceptions were abused considerably.

SUMMARY

	States Which Except Possession for Personal Use	States Which Do Not	States Which Prohibit Possession Statutorily Subject to Exception
Alabama	X		X
Arizona	X		X
Arkansas	X		PUBLIC ONLY
California	X		PUBLIC ONLY
Colorado	X		X
Connecticut	X		ONLY SALE
Delaware	X		ONLY SALE
Florida	X		X
Georgia		X	X
Idaho		X	X
Illinois	X		ONLY SALE
Indiana		X	X
Iowa	X		X
Kansas		X	X
Kentucky	X		X
Louisiana	X		X
Maine	X		ONLY SALE
Maryland	X		No Law
Massachusetts	X		No Law
Michigan	X		X
Minnesota	X		ONLY SALE
Mississippi	X		X
Missouri	X		X
Montana	X		X
Nebraska	X		X
Nevada	X		PUBLIC ONLY
New Hampshire	X		ONLY SALE
New Jersey	X		ONLY SALE
New Mexico	X		X
New York	X		X(repealed 1923)
North Carolina	X		X
North Dakota	X		X
Ohio	X		X
Oklahoma	X		X
Oregon	X		X
Pennsylvania	X		X
Rhode Island	X		X
South Carolina	X		X
South Dakota	X		?
Tennessee		X	X
Texas	X		ONLY SALE
Utah	X		X
Vermont	X		X
Virginia	X		X
Washington	X		ONLY SALE
West Virginia	X		X
Wisconsin	X		X
Wyoming	X		ONLY SALE

III.

Marihuana and Education

This chapter, *Marihuana and Education*, surveys the recent increase in marihuana use by American youth from the elementary grades through college, and how the states' public education systems and institutions of higher education responded to the phenomenon, including the drug programs and education materials which they have developed.

The chapter includes the following eight sections:

- (1) Drug Programs in American Education.
- (2) Commission Visits.
- (3) Drug Education Programs of Special Interest.
- (4) Marihuana Education in State Programs.
- (5) Surveys of College Drug Courses.
- (6) The Federal Government and Drug Education.
- (7) Charts: 1. An Analysis of the Roles in Administering Drug Education Programs of the State Departments of Education.
2. Drug Education Grants, Office of Education.
- (8) Bibliography of Drug Educational Materials.

Drug Programs in American Education

The National Commission on Marihuana and Drug Abuse was mandated to inquire into the use of marihuana and other drugs in the educational environment of the nation, and to survey the existing and planned educational programs aimed at providing understanding about drugs, their effects and the prevention of abuses.

The Commission learned shortly after the inception of its study that there are few, if any, drug education programs devoting special attention to marihuana. In virtually all the schools surveyed, information relating to marihuana is a part of the general curriculum or is included in the resource materials as one of many substances.

This chapter, while primarily concerned with marihuana, makes required references to other drugs, although a review of all chemical substances which have taken their place in the use patterns of students and which appear in public school drug education programs will occur in the Commission's second, more comprehensive, report on drug abuse.

The reporting is general and as factual as possible. There are only selected references to states, public school systems and institutions of higher learning.

This section does not discuss the social issues which have influenced the youthful use of drugs, a subject covered in other chapters of the report. But the mounting problems of the nation's educational systems, now charged with the additional responsibility of drug education, do demand some attention. There is widespread evidence that American education is not prepared to meet the challenge.

American schools did not change significantly during this century until the advent of Sputnik in the late fifties. Then, as the need for trained scientists and engineers spurred a renewed interest in the state of the education establishment, it became apparent that American schools were failing to teach reading, writing and arithmetic as they once did and were expected to. The results: 25 million functional illiterates, a sense of futility in most ghetto schools, extreme classroom discipline problems, increasing vandalism, spreading drug use, the lowering of the level of student performance and a rising rate of high school dropouts.

Much of this was due to the shortage of good teachers brought about by undue emphasis on classroom objectives other than excellent pedagogy of an earlier day. There was a misplaced emphasis on the "academic course" which discouraged millions of children, while conversely, standards were lowered to include the substitution of non-subjects (such as, social studies, driver education, language arts, family living) for what had once been a rigorous curriculum.

At the same time, there were substantial changes taking place in the schools which had a salutary effect. The knowledge explosion centered around the sciences had great influence in altering many classrooms. Coupled with this was experimentation and free structuring of class time which did permit a few schools to introduce subjects and methods which proved highly instructional. Many high schools, influenced in part by the new college programs, were spurred on to new levels of high performance. Unfortunately, there were too few of these enriched programs and they were frequently located in communities which had already achieved a high degree of educational attainment. Meanwhile, education worsened in most parts of the nation.

The Salk Institute Seminar (1971) summed up the state of American education by declaring:

The system is in need of radical reform. Its failure to impart the ability to read is alone enough to condemn it for the purposes of a society that lives, not by oral tradition and simple manual skill, but by written information, technical instruction, job descriptions, road signs, and warnings of high voltage.

Society's concern about students' use of drugs

has been longstanding and has expressed itself through state and federal action on numerous occasions. In 1961, a California Special Study Commission on Narcotics pointed to the lack of statewide coordination of narcotic instruction and to the dependence of educators upon law enforcement personnel for classroom presentation on narcotics. In the words of the Commission, "The educator should assume the responsibility and prepare himself to teach the subject."

Two years later a Presidential Commission went considerably further by stressing:

... an educational program focused on the teenager is the *sine qua non* of any program to solve the social problem of drug abuse. The teenager should be made conscious of the full range of harmful effects, physical and psychological, that narcotic and dangerous drugs can provide. He should be made aware that although the use of a drug may be a temporary means of escape from the world about him, in the long run these drugs will destroy him and all that he aspires to. The education of the teenager is, therefore, an essential requisite of any prevention program (Advisory Commission on Narcotic and Drug Abuse, 1963: 17-18).

The Commission views the educational chapters in this Report and the second year Report to be interrelated. This section, the first phase of the two-year study, includes several modest educational surveys and an account of a preliminary nationwide series of visits to elementary and secondary schools and institutions of higher learning. These visits were to provide information and data on existing marihuana and drug educational programs so that the Commission could make a factual report to the nation on what was actually happening. These undertakings will expand during the second year.

The Commission's first task was to review carefully the various drug programs that came to its attention and the opportunities for teacher training. No attempt has been made to describe a successful program, for the Commission at this time is not convinced that any program in drug education is achieving substantial success.

The Commission's inquiry into education, on the other hand, did succeed in developing an overall understanding of what the states and territories have undertaken in drug education and the various problems and difficulties which they had encountered.

This section of the Report represents findings from the following inquiries:

- (1) Survey of the leadership roles in drug education of State Departments of Education;
- (2) Visits to 19 Public School Districts;
- (3) Visits to 13 institutions of higher learning;

- (4) A survey by National University Extension Association (NUEA) of post baccalaureate and professional drug education training programs for teachers; and
- (5) A survey by Federal City College of the post baccalaureate professional drug education training programs for minority group teachers and community leaders.

State Departments of Education Survey

Since the states have the responsibility for the education of its citizens, the Commission was anxious to learn how those entrusted with this charge were providing leadership, and rendering support to the school districts lying within their jurisdictions.

Early in July 1971, the Commission wrote the chief state school officers in each of the states and territories requesting answers and comments on the following areas of Commission concern:

- (1) The role of the State Departments of Education in initiating teacher-training programs and other state programs in drug education;
- (2) Whether the State Departments of Education had developed special drug education curricula or were in the planning stages;
- (3) Whether the public and private colleges and universities were offering professional training for teachers in drug education at the undergraduate and post baccalaureate levels;
- (4) Whether the states were requiring the teaching of drug education programs at the elementary and secondary grades, or permitting the local school districts to make that determination;
- (5) The kinds of resource materials which the states had developed and made available to the local school districts; and
- (6) The concerns, attitudes or philosophies which the State Departments of Education have adopted or might want to convey to the Commission related to students' use of drugs.

Each of the states and territories replied. The Commission, as a consequence, has in its files voluminous information on how marihuana and other drugs are viewed by the states' highest educational officers, the roles these officers have assumed in providing direction and leadership in developing programs, and the curriculum guides and various resource materials which they currently provide to the school districts or are in the process of developing.

The states vary considerably in their attitudes about marihuana and other drugs, illustrated sharply by the variety of programs being provided or considered for statewide use. A number of states view the increasing use of drugs by youth with detachment, while others are reacting uneasily to the phenomenon which they have difficulty in understanding. A few states have displayed leadership and have directed some of their professional and financial resources toward specific courses of action. These states have generally made use of the recent, small federal grants for drug programs by continuing limited opportunities for in-service training programs within the states' educational systems. They have, also, produced curriculum guides and made them available to the school districts within their jurisdiction, and in some instances developed resource materials for both teachers and students.

In some states, there are virtually no activities taking place, while in others there are state appointed drug councils or commissions. A small number of states have drug coordinators who are devoting full time to developing programs which are attempting to determine why so many children have experimented with drugs or continue to use them.

Although the youthful use of drugs developed rapidly and is well-known to those involved with education, even the largest and wealthiest states have responded slowly and have designated too few professional staff and insufficient funds for drug education programs. In some large states containing major cities where the incidence of drug use among school children is quite high, the states and the school districts have neither developed programs nor assigned professional staff to deal with the problem. The large city districts invariably claim lack of funds and trained staff, while the State Departments of Education customarily take the position that drug education is a local responsibility.

The State Departments have had, in turn, only minor support and guidance from their legislatures. According to the information received from the State Departments (Table 1), only 24 states require a drug education program as a part of the curriculum, or as part of the on-going physical and health education classes; in addition, three states request that schools conduct drug education classes.¹ In the federal territories, providing

¹ The states mandating or requesting drug education in schools are Alabama, Arizona, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Minnesota, Missouri, Montana, Nebraska, New Jersey, New Mexico, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Texas, Utah, Virginia.

drug education classes appears to be a matter of option with the local schools.

In sum, less than half of all the states and territories have taken an official position that drug education should be incorporated into regular classroom instruction.

IN-SERVICE TEACHER TRAINING

In-service teacher drug training exists to some extent in every state. The Federal Government can properly assume responsibility for this program getting underway. The Office of Education in the Department of Health, Education and Welfare in fiscal year 1970 made drug education grants to the states on a formula basis totaling \$2,864,520 (See Table 2 at end of chapter). The grants ranged from \$20,000 to a territory, and \$40,000 to a less populous state to grants twice that size for the larger states. The grant program has continued though on a smaller scale in the succeeding years.

It was the hope of the Federal Government and of the states that through an in-service teacher training program relatively few teachers could participate in training workshops and return to their school systems to teach other classroom teachers.

In practice, the in-service training programs have had handicaps. While willing to use federal assistance, few states provided additional funds to develop training programs sufficiently large to offer maximum training opportunities for teachers or to support the professional staff needed to administer the programs.

Invariably, the selection of teachers for participation in the training programs was made by local school administrators, who many times were not as discriminating as necessary to insure that the teacher trainee was capable of instructing other teachers. In many instances, the local school administrators did not give the returning teacher the required support. Frequently, teachers were either ignored upon their return, or were given minimum opportunities to impart the results of their drug training to their fellow teachers. Very few states and districts made any significant effort to capitalize upon training opportunities or to make them widely available to their professional teaching staffs.

Consequently, too few teachers have participated in formal training sessions, and upon their completion have provided only modest assistance to the large number of teachers who have the responsibility for daily classroom instruction in drug education.

Despite the drawbacks, it is useful that the states do have rudimentary in-service training programs for teachers in drug education. Given strong leadership and adequate funds they could make these training services highly productive. This would require proper selection of qualified teacher-trainees, intensive workshops led by skilled professionals, and a commitment by local school officials that the teacher-trainees would be supported in their own training programs at the local level.

CURRICULUM GUIDELINES

As with in-service training of teachers, the ultimate responsibility for developing drug education programs, including curriculum guidelines, rests with the states and the territories. While the Federal Government can assist in providing professional guidance and funds, the actual implementation is a state responsibility.

Few districts, regardless of their size or resources, are capable of developing satisfactory drug programs. Without technical guidance and financial assistance, they invariably rely upon long established health and physical education programs embellished slightly with reference to drugs.

Yet, the survey reveals that only 17 states have developed drug education curricula which are available to all their school districts; an additional 10 states claim that they are now preparing curricula guidelines, while three other states report working on future plans. There are still 20 states where total reliance is left to the local districts. In a number of these districts there is no hope of developing any kind of meaningful curriculum, or of responding to youths' drug educational needs. It is traditionally in these same districts that there have been no realistic teacher-training programs. These districts remain remote, unassisted and yet bewildered by the mounting use of marihuana and other drugs.

A number of states, while ostensibly providing curricula guidelines in drug education, are in reality simply expanding their physical and health education curricula, or adding a few pages containing slight references to drugs. The number of new curricula developed specifically for drug education is few.

The consequences of this neglect or refusal to accept responsibility are that thousands of districts have no meaningful drug programs. Unless the State Departments of Education take the initiative, it is unlikely that drug education programs in many districts will deal with the issue in more than a token way.

COLLEGE PROGRAMS FOR TEACHERS

In addition to the in-service teacher training programs which the states and numerous districts provide in a limited fashion, there is additional need for professional training opportunities at the undergraduate as well as post baccalaureate levels.

The states' responses did not enable the Commission to differentiate the types of programs, although 40 states indicated that institutions of higher education were offering various kinds of professional drug education instruction. Five states reported no programs and five gave no information or said that they were surveying the colleges to learn what was being done. The surveys by the National University Extension Association and Federal City College will deal more fully with the breadth and scope of these programs.

College-level instruction is essential to drug education because it is relatively new and inter-relates with so many other disciplines. Responsibility for these programs inevitably lies with the institutions of higher education. These schools, particularly the large state and private universities, are the only agencies that have the faculties and the professional and technical resources required for conducting comprehensive drug education programs.

Drug education involves the services of many disciplines, particularly those in the health and social professions. It requires an understanding of the pharmacology of drugs and their effect upon human behavior, why some individuals use drugs, why others don't.

An increasing number of states have proposed that every teacher who teaches the subject of drug use should secure adequate training and preparation as to the nature and effects of narcotics and dangerous drugs, but currently the required undergraduate programs are few and the advanced professional courses not uniformly developed.

Professor Hackett (1971) at the University of Virginia sums up the need for collegiate interdisciplinary training of teachers in this way:

The problem of drugs is being recognized and feared more and more by the communities, schools, churches, colleges, which are slowly trying to accommodate students' demands for accurate information on drugs. One of the difficulties is that there are relatively few experts in the field. Moreover, drug problems relate to such a wide medical-sociological-legal spectrum of information that it would be unreasonable to expect any single individual to be a truly effective drug educator. This is why the role of the educator in providing drug education programs is so complex. In fact, this dearth of expertise is even more apparent in the colleges and universities which must train the teachers. We believe that drug education must begin with utilization of talents of many individuals, each knowledgeable in some aspect of drug

education—educational, historic, legal, medical, pharmacological, psychological, and sociological. In other words, we strongly advocate an inter-disciplinary approach that eliminates the complex expert.

Because most school teachers have a minimum knowledge about drugs, even the common self-administered medicine cabinet variety, it may be presumptuous and counterproductive for them to conduct classes unless they are adequately prepared. Sufficient preparation is not acquired in attending a weekend workshop or listening to one expert give a two-hour lecture in his own specialty.

Confronted with evidence of drug usage, the untrained classroom teacher frequently reacts in a negative and harmful manner. He assumes that marihuana and drugs are an unmitigated evil and he is fully aware that their use is illegal. As a result, he either tries to ignore the students' use of drugs or he adopts a hard intemperate attitude in trying to prevent their use.

A number of state superintendents made significant comments about their own training programs. The chief state school officer of a large midwestern state wrote: "With the cutback in educational appropriations, it has been difficult for districts to provide released time for teachers to attend training programs" (Commission on Marihuana and Drug Abuse Survey of State Departments of Education, 1971, hereafter referred to as CMDA Survey, 1971).

A large industrial state in the East reported that due to the lack of funds, the state was not expanding the training program for teachers, even though the incidence of marihuana and drug use was high, particularly in its largest cities (CMDA Survey, 1971).

The review of the ongoing professional drug education programs at the college level offers no real clue as to what is actually happening across the country. One gets the impression that the scattered colleges providing programs of professional training do so at the specific request of individuals or private groups but that few have developed meaningful programs and enrolled more than a handful of the total number of teachers requiring professional instruction. The Commission found, however, that there was an expressed need for this type of training in every section of the country.

STATE RESOURCE MATERIALS

Half the states provide resource materials for their school districts (CMDA Survey, 1971). A complete listing of the major state publications and a selected number of local district resource booklets will be found at the end of this chapter.

The resource materials vary considerably in value. Some have been carefully written and edited and contain much information and helpful suggestions. Others are poorly assembled and reflect an attempt to publish almost anything that might be of even the most exiguous assistance to the classroom teacher.

A review of the materials indicates that there has been minimal exchange of information from state to state. A great many concurrent efforts have produced relatively similar products, often pedestrian and of limited value.

The Commission did not learn of any evaluation procedures or programs in the survey that could be used to test the adequacy of the countless drug programs being given millions of students.

A SUMMARY OF DRUG EDUCATION CLASSES IN PUBLIC SCHOOLS

Elementary

The survey of the State Departments of Education and Commission visits to the school districts reveal that drug education within a modest framework has existed in numerous elementary schools for many years. Until quite recently, instruction in drug substances including marihuana had not been included in these beginning programs.

The early programs dealt generally with drugs customarily found in the home medicine chest. The classroom teacher and sometimes the physical education instructor provided the instruction.

These rudimentary programs did give children an understanding of a few simple principles. They included knowing that some drugs are used to relieve pain or illness; some drugs are dangerous and can make one ill; and that no child should accept a drug or medicine unless given by a doctor or parent.

In the book, *You, Your Child and Drugs* (Child Study Association, 1971: 58-59), a suggestion is made that a child's drug education must begin at a very early age. It advises:

A child's education about drugs begins when he is a toddler and dangerous substances in the household, ammonia, insecticides, oven cleaner and the like, as well as the family's medicine—are kept fully out of his reach. Like the early warnings that we give our children about knives, matches, hot stoves and boiling pots, warnings about dangerous drugs are a routine part of the total education he needs from us to ensure his safety and survival. . .

As our children grow older, they learn that drugs are sometimes necessary; they go to a doctor or clinic and get shots to protect them from a variety of childhood diseases. They have sore throats and earaches and take a prescribed antibiotic to cure them. They also learn that drugs are not used for every ache and pain, but reserved for a time

when they are really needed. In teaching our children to develop a discriminating view of drugs, it helps if we ourselves do not resort routinely to pills as a panacea for all our mild physical pains and psychic complaints.

The State Department of Education in Virginia in its *Health Education K-7* (1971: 12), makes the following recommendation for teachers:

Kindergarten and first grade teachers have a responsibility for understanding the characteristics of children with whom they work and the environment from which they come. Children of this age are imaginative, curious, and extremely active. They have a feeling of insecurity, feel the loss of mother, want to be loved and to be praised regardless of their success. All children should have an opportunity to perform duties and make contributions to group living. As a result of observations, the teacher should plan procedures to develop an atmosphere designed to improve the mental attitudes of her pupils. Her interests and observations must be as keen and colored with curiosity as those of the children.

While health education has been relatively common in the lower elementary grades, State Education Departments and school districts have exhibited some reluctance to include actual drug education in these programs. The local school board is frequently left to make the decision whether drug education should be provided in the K-4 curriculum. A number of states, including Connecticut, Indiana, Maryland, and Texas, have taken the position that drug education should not begin until grade 4 or 5 (Table 1).

Recently, the trend has been for an increasing number of states to mandate drug education programs for children at all grade levels. The more progressive school districts have not only inaugurated comprehensive programs but have also encouraged teachers to incorporate drug education in their regular classroom work. In those 24 states which still permit local option and leave the responsibility for drug education entirely up to the local school district, irregular patterns of drug education programs at the elementary grades have developed. There are districts providing no drug education programs adjacent to districts where well-developed programs exist. Some districts where the incidence of drug use among children is high have no programs while in adjoining districts, where the incidence may be low, programs do exist. One southern state reported that its school districts develop and present elementary programs in drug education entirely in accordance with local needs. Another state bordering Mexico confesses that the use of marihuana is extremely widespread among students and admits that very little has been done in a preventive way within the state school system (CMDA Survey, 1971).

A mountainous state that contains a number of relatively large cities where drug abuse is prev-

alent has not attempted to provide leadership in the area of drug education. It reports that 107 out of 181 school districts, relying on their own initiative, have provided programs of various descriptions (CMDA Survey, 1971). A large agricultural state reported that it has not developed a guide for drug education nor does it feel that one is necessary. It further informed the Commission that few elementary schools have introduced programs into their curriculum (CMDA Survey, 1971).

Secondary Education

There are 24 states that mandate or require drug education at the secondary levels, while three other states request that programs be included (Table 1).

School districts generally report that some form of drug education is included in the grades from 9-12, although the types of programs vary considerably from district to district and school to school. Many high schools rely principally upon physical education programs that include references to drug education, with the physical education instructors still retaining the sole responsibility for providing instruction in drug education.

In other schools, classroom teachers include drug references within their disciplines and endeavor to keep the drug theme relevant, interesting and informative throughout the entire year. And still other schools have developed professional teams assigned to work with students either in regular classroom sessions or in special classes reserved for informal and unstructured instruction.

Drug education, as the Commission found, is considerably more widespread at the secondary level than at the lower grades. Most school districts are aware that by the time a youth reaches his teens he is more than likely to have begun experimenting in practices that are forbidden. It has long been a part of growing up for teenagers to commence the use of tobacco and alcohol and more recently, to turn also to marihuana and a variety of other drugs.

The Commission found that despite the awareness of the seriousness of drug taking by students, many State Departments of Education admitted to the following positions (CMDA Survey, 1971) :

"The state is aware of programs developing. The state assumes that other districts are active in drug education on their own initiative."

"The state recommends that schools use curriculum identified by the National Clearinghouse for Drug Education."

"Materials must be developed by local counties. Two such are included in our files. . . ."

"The schools are to plan their own drug education programs."

"Elementary and secondary schools in unknown numbers are currently offering drug programs."

"Local districts do as they wish and apparently nothing much is being done except in the larger districts."

"Drug education is optional with local schools. Many schools do not have programs. Whatever programs exist, center around alcohol."

"The Department does not have a policy in regard to marihuana and has indeed suggested to schools that there is no need for schools to take a position on the substance since they do not have the power or authority to legalize it or alter the penalty in regard to it."

"The state has no hard data available indicating the number of schools providing programs although it is believed that at least some districts are developing programs."

Although there is an unfortunate lack of state leadership in drug education programs, there is a growing awareness at the local level, and many innovations are beginning to occur in even the most widely scattered school districts. This is particularly true where parental interest and influence remain high in school affairs and where, as a result, boards of education are being pressured to develop new concepts and vital programs carefully patterned to meet the relevant needs of school children.

In spite of the increasing number and variety of drug programs, there remains the unanswered question, are the drug education programs succeeding? No one really knows; there has been virtually no evaluation of the various drug education programs swamping the market from private companies, civic organizations and the government. The Commission will inquire into this neglected area during the second year and endeavor to assist in developing appropriate evaluation procedures.

Institutions of Higher Learning

During its first year, the Commission devoted a major part of its educational undertaking in surveying the nation's public schools' efforts in developing drug education programs, and only a minor portion of its time in observing drug activities on the college campuses.

During the second year, the Commission will broaden its inquiry into student drug practices on the college campuses and the steps which the institutions have taken in response. Of principal concern will be the policies and regulations adopted

by the institutions of higher learning because of student use of drugs, and whether such policies have been implemented. The Commission would also like to learn how many institutions are providing special programs for student drug users and those who may be drug prone; and the roles that the student health services and clinics play in education and rehabilitation.

The Commission has completed visits to 13 university campuses, nine located in the East, two in the South, one in the Midwest and one on the West Coast. The visits were too few to draw any conclusions about patterns of marihuana use and institutional responses. But, taken with the Commission hearings, a number of which were held on campuses; consultations with university administrators, faculty and students; the findings of several surveys; and an examination of much public testimony, the Commission believes that a preliminary report of its findings will be helpful in understanding the recent increase in use of marihuana by college students.

The Commission's National Survey (Abelson et al., 1972) revealed what many Americans have suspected, that among all persons, college-age youth have consistently maintained the highest incidence of marihuana usage in recent years.

The survey disclosed that 39% of the college-age group, 18-25, has tried marihuana, but that only 17% now continue to use it, indicating that somewhat more than half of college-age youth who have tried the drug have stopped. In comparison, the survey disclosed that 14% of youth age 12-17, and 9% of adults past 25 have tried marihuana. Of the latter group only 1% now continue its use.

Without exception, on the campuses visited by the Commission, marihuana is presently tolerated if not accepted. Indeed, there had been virtually no arrests made during the past year, although the institutions maintained that their vigilance against the use of drugs of abuse remains unabated.

Two institutions admitted a high rate of heroin use, but these schools, large institutions located in the inner city, have a very high percentage of black and other minority students and reflect to an extent the drug habits of inner city residents.

Where heroin is used, students, faculty and administration fear violence. The fear results from assaults against individuals, theft of personal possessions to obtain needed funds for a "fix," and the invasion of the campus by "pushers" and an accompanying criminal element.

One large, elite eastern university has accepted with resignation marihuana use by most of the entire student body and a sizeable number of its faculty. No longer do marihuana "busts" take place on the campus. But when the university re-

ceived information in the spring of 1971 that hard drugs would make their appearance during the fall term, the university decided to make a maximum effort to prevent it. Hard drugs did appear during the fall and the institution's response was quick and uncompromising. A large "bust" trapped a number of students and "pushers."

One major midwestern university had a recurring problem over a period of some months with heroin, cocaine and LSD. Pushers from the street had entered the dormitories and were enticing a growing number of student customers. From time to time, the city police had staged arrests which were denounced by the students and embarrassing to the administration. The university challenged the students to drive the pushers out and to dispense with the use of hard drugs with a promise that the city police would no longer be permitted to stage raids. The students agreed, and all drugs but marihuana almost totally disappeared.

The 13 institutions visited insist that their own security forces assume responsibility for campus protection, remain in charge of student conduct, and have authority over the control of campus drugs. Each of these institutions has requested the city and state law enforcement agents to remain off campus unless specifically requested to assist the campus police. In every instance the request has been honored.

The administration of one large western university, following a series of major campus protests and violence, instituted a hard line against the use of marihuana. The drug was prohibited and the school repeatedly declared that possessors and users would be punished.

Yet, marihuana is used openly on the campus and its odor can easily be detected in the student union center and a number of classroom buildings. Students queried stated that they continue to use the drug and that they are aware of no arrests. The security police also confessed that, despite the ban, they make no arrests. In practice, most colleges no longer even threaten arrests, the Commission learned.

A number of medical doctors who serve at university health centers object strenuously to the marihuana phenomenon being labeled a "marihuana problem." They say that except for a minute number of students who may use marihuana to excess or are harmed because of the impurity of the product resulting from a mixture with foreign substances, the use of marihuana generally has caused few health problems.

While a number of schools have informal programs and conferences relating to drugs for both students and faculty, mainly informational, the

Commission in its survey learned of no school which offered regular scheduled programs on marihuana or other drugs. Marihuana use seems to be considered as a health matter and left to the care of professional medical staffs at each institution.

Commission Visits

The survey of the State Departments of Education provided the Commission with pertinent information and data regarding the states' leadership role in developing and supporting drug education programs in their district constituencies. It provided scant information, however, about current, operational drug programs in the school districts themselves. The Commission, therefore, undertook a series of visits to representative districts in order to learn first hand how boards of education viewed their own responsibilities and the kinds of drug education programs which they currently offered in their elementary and secondary schools.

The Commission's intent was to visit most of the principal cities and a significant number of smaller ones prior to the writing of the final Report on Drug Abuse, and also to complete visits to a sufficiently representative number prior to the issuance of the Report on Marihuana.

The Commission visited 18 boards of education, nine in major cities and nine in smaller towns or counties. The boards are located in nine major jurisdictions: California, Georgia, Kentucky, Maryland, New York, Ohio, Pennsylvania, Virginia and the District of Columbia.

The boards of education in the nine major cities, each the hub of a metropolitan area, and the boards in the smaller jurisdictions are jointly responsible for the public education of nearly 40 million persons, or about 20 percent of the country's population. The major cities, have an unusually high incidence of drug abuse.

Where possible, the visits began with the superintendent of schools and his staff in order to gain an understanding of the philosophy of the administration, and the direction and support they were giving their principals and teachers in drug education programs. The visits also included observation of actual classroom work in order to learn about the content of the drug programs and to understand the interreaction between teachers and students.

Usually in the larger school districts, and occasionally in the smaller ones, one person is designated by the superintendent as the director or the coordinator of drug programs. He shoulders the responsibility for developing and organizing drug

programs. Frequently, however, he is buffeted between the demands of a superintendent to develop and implement programs in the district's schools and the cautious objections of school principals who resist drug programs either as a criticism of their administrative control or as another course to be added to an already overcrowded curriculum.

A wide range of interest and support appears evident among administrators and teachers with respect to drug education. The Commission tried to view the school programs objectively and offers the following as a series of case studies of programs currently being conducted. To respect the confidentiality of the administrators, teachers and students interviewed, names and places are not identified.

A LARGE NORTHEASTERN CITY

This city is one of the nation's largest and oldest. During the last two decades it has undergone rapidly changing racial, social and economic patterns. The central city, still retaining some of its vestigial power and affluence, has become by 1972 overwhelmingly black. The inner city residential areas have disintegrated into unending blocks of neglected housing, littered streets and high crime neighborhoods. Pushers, junkies and prostitutes make many of the streets unsafe either by day or night.

The use of narcotics in this city ranks among the highest in the United States. Police estimate that between 20,000 and 30,000 addicts roam the streets. Returning veterans who are unemployed add to the problem and, on the average, one is arrested daily on either a narcotics charge or a drug-related crime.

The superintendent of schools has placed the responsibility for drug education in the administrative division charged with physical and health education. Actual administration of the programs rests with an assistant to the divisional director. Understaffed and only modestly supported by the central administration, through eight supervisors, he attempts to direct and encourage drug education through his several hundred gym teachers. But even the admitted urgency of the drug crisis in this city commands only one-third of the assistant director's time.

Until very recent years, the elementary and secondary schools in this city devoted only one classroom period a year to drug education. Slowly, however, in 1970, the schools began moving toward a multidisciplinary approach to drug education. The Board nearing actual bankruptcy could not pay for the essential in-service teacher training and

requested the Federal Government to assist with a \$200,000 grant. The proposal was rejected and neither the in-service training nor the multidisciplinary approach got off the ground.

Unable to get federal funds and ignored by the state, the board was forced to rely upon its own meager resources. With the assistance of a drug advisory committee, the board did publish a manual, essentially a teachers' guide, and made it available to the thousands of teachers in the system. While there is some evidence that many teachers do use the guide and incorporate drug education in their daily classroom instruction, there is no firm pattern. The prime responsibility continues to rest with the gym teachers in their health programs.

For efficient and effective administrative control, the system is divided into a number of sub-units. Only in one unit has a district superintendent established a special resource center and drug education library for his faculty, students and neighborhood parents. Due to the great need for this kind of information, however, it has become a modest and valued resource for school personnel in the entire system.

In this city, there is wide use of many drugs, as there is in most large urban cities; and the use appears to be still rising among youth. While the patterns of drug usage are somewhat mixed among school children, as reported by school officials, one does get a general impression about use of various drugs. Heroin is easy to acquire and popular in the stricken black ghettos, as is marihuana. There is evidence that even the very young school children use both drugs, although a much larger number of older youth uses them. The use of cocaine is relatively rare, while barbiturates and amphetamines tend to be quite popular among the pre-teenagers, but not so much among older youth.

An account of two widely differing schools in the city may throw some light on patterns of use and social behavior.

One is an old, but well-maintained elementary school in one of the still changing neighborhoods. The population has been shifting from lower-middle class white to lower socioeconomic black. A majority of the families are receiving public assistance, and a high percentage of families are without fathers. Housing projects surround the school, and one unit is widely known as a center of hard drug activities.

Within the school, the students push and use pills—red devils—although there is a brisk trade on a lesser scale in marihuana. Pills are popular because detection is less likely under an alert school administration which is assisted by guards

stationed in every corridor. Pills, also, are easily obtained from adult sources and can be sold at relatively low prices.

Within the last 24 months, two students died from overdose of pills, and for a time the school and the children were shocked by the event. The tragedy was soon forgotten, however, and the drug traffic increased.

School officials report that the pushers in the school are young girls, 11-12 years of age, and it is said that they are encouraged by their mothers to push pills rather than to steal or hustle. A mother of a large family who serves as a paraprofessional in the school and who works closely with families in the housing projects made this allegation.

Anyone participating in a class on drugs must be impressed by the sophistication and uninhibited discussion of drugs by the children in this school. They argued openly about the effects of one drug against the other, many relating their own or family's personal experiences. Most of the children in one class admitted using marihuana occasionally and most of them believed that marihuana should be legalized. While high users of pills, many of the children seemed blasé about their use, and were quite negative about heroin.

It is doubtful that this school, located in the center of widespread crime, can cope successfully with the drug problem which is on the verge of engulfing it. As in the rest of the city medical advice and assistance are sorely needed, but there is no clinic in the school to which students with drug problems can freely go, either on their own or at the suggestion of the school authorities.

The other institution, a secondary school, is several miles distant. It, too, is located in one of the most depressed and crime-ridden neighborhoods in the city. In fact, the majority of the city's heroin addicts live in the area where the school is located.

The high school enrolled slightly more than 2,000 male students at the opening of the 1970-71 school year, but at the close of the year, enrollment had dropped to less than 1,500. Attendance at the school is ignored, and many teachers feel relieved if students fail to make an appearance. At times absences may run as high as 50%.

The school is a jungle. Its walls inside and out are defaced with graffiti, some in strange and intricate designs. The doors of the classrooms are boarded, wired and bolted with large padlocks so the teachers can be protected from intruders while they attempt to conduct their classes. Students at times roam freely throughout the building and administrators and faculty are always alert to a possible assault.

Some seniors in the school can neither read nor write. There are many of Spanish background who do not understand English, the medium of almost all instruction. For many students an examination or a test must be given orally by the teacher.

The administration admits the open use of hard drugs in school. Generally, heroin is shot in the lavatories since few non-heroin users go into these known and dangerous isolated rooms. Marihuana is considered of such common usage that literally nothing is done to contain or prohibit it. Some pills are used, but not in appreciable numbers. Apparently there is some tactile and visual pleasure in using drugs that must be manually controlled.

The school is a sanctuary from the police, although it is continually patrolled internally by the school's security force, large but not quite as large as a sister institution nearby which has a detail of 21 officers on duty at all times.

No drug arrests were made in the school during the last year nor, as far as could be ascertained, were any students suspended or dismissed. The high attrition rate of students appears to take care of many of the major problems of drug abuse.

The school has an extremely low academic rating but high athletic success. Despite the widespread use of drugs, the institution boasts of championship teams in all sports, a fact even the coaches don't quite understand.

Very little discipline exists in the school except in the athletic programs. There, a team of 10 men, working in pairs, under close, strong supervision maintains a high degree of discipline. Since the boys want to engage in sports, they obey the gym teachers and conduct themselves in an acceptable behavioral pattern.

At times the school doctor detects and reports the use of hard drugs to school authorities, although scant attention is paid to the use of marihuana. At other times, students disclose their use of drugs to the school nurse or one of the faculty members. Infrequently, some request medical help.

There are two hurdles in obtaining greatly needed rehabilitation and medication for the students. The first is the lack of sufficient hospital and clinical services. There are long waiting lists in all the city's hospitals and clinics for detoxification or other treatment. Principals and teachers are reluctant, although required, to make whatever contacts and arrangements they can for health services. The second hurdle is the fact that the Board of Education, through its medical doctor in charge of health services, has issued a firm rule that no referrals may be made without parental consent.

In most cases, it appears that students do not want their parents to know of their habits. Some admit that their parents are addicts and generally unsympathetic, some fear violence from them, and others are ashamed. In one recent case, a senior, hooked on heroin, requested help. He refused, however, to permit the nurse to phone his parents because his two older brothers were presently in prison on drug charges, and he felt that his parents simply could not rationally accept his admission of addiction.

The school personnel will not violate agreements of confidentiality with students for both ethical reasons and a genuine fear of bodily injury or death. As a result, most youth on drugs are not referred to health agencies, but continue in school and contribute to the ever-increasing use of drugs by infecting others.

The use of marihuana is widespread. In those instances where referrals have been made to clinics or hospitals, there have been repeated refusals of medical aid because of the relatively low importance health professionals give to marihuana use as compared to the use of other abused drugs. The clinics maintain that they have far graver problems in contending with heroin, and besides there is virtually nothing that clinics can do for marihuana users, unless, as in exceedingly rare instances, they encounter a heavy overdose.

A SMALL MIDWESTERN TOWN

This small town of 50,000 inhabitants lies directly across the river from a large city, for many years the center of an ever-expanding metropolitan area.

Unlike its larger neighbor, the smaller municipality has had only modest changes occurring in its population and way of life during the last 35 years. Its white population is 90% and the black population, as for many years, continues at about 10%. The larger city, once overwhelmingly white, has in recent years increased its black population to 45% who live in all sections of the city. All the problems besetting large American cities are woven into this metropolis, but apparently have by-passed the smaller town.

The town claims a population that has remained fairly constant and unable to grow because of surrounding towns hemming it in—the population is also tightly homogeneous and well-knit. Many families can boast three or four generations living in the same neighborhood. There are few sharp differences in economic well being, for most of the residents are lower-middle class industrial workers. Few are unemployed and the public assistance

rolls are short. The town remains relatively free of crime and is usually orderly.

The school district is small. It enrolls 9,000 students, approximately 5,500 in elementary grades and 3,500 in the junior and senior high schools. Heading the district is a superintendent who was born and raised in the town and, except for four years of college in the adjacent city, has spent all of his working time in the same district, as teacher, as principal and now chief school officer. Many of his faculty have followed the same pattern.

Some drug use exists in the town, but according to the school authorities, this is minimal. At a number of large school functions, some minor use of marihuana has been noticed, but in general there is very little drug use and no arrests have been made.

Health education includes drug discussions in some classes, and the superintendent reports that classroom teachers are encouraged to include drug references in their daily classroom work. The teaching about drugs is deliberately kept at a low key, and the school administration seemed to be reasonably satisfied that its drug education was serving the needs of both the students and the community.

A LARGE WESTERN CITY

The city has a school district enrollment of approximately 100,000 students in some 150 elementary, junior and senior high schools.

The superintendent is a vigorous and knowledgeable leader who displayed an intimate concern about his district's operations and had first-hand information about the use of drugs among students at the three educational levels.

The district, as a number of the larger ones in the West, has a cosmopolitan mix. No ethnic group can claim a majority, although numerically whites have a slight advantage. The schools contain a large number of blacks, Mexican-Americans and Asians. Academically, the schools rank high and a large number of graduates go to college.

The makeup of the school population is reflected in the patterns of drug usage. The Commission has noted that marihuana has been a drug of relatively common usage among members of urban, ethnic minorities for many years. And, in this city and school district, marihuana use is widespread among both adults and children. But use is not confined to these ethnic groups; white children use the drug with apparently the same frequency. Other drugs, particularly alcohol, are also used, and the latter, in the form of popular, cheap wines, in increasing amounts.

The school administration, some faculty members and the children believe that marihuana use should be permitted without criminal penalties. They argue that it is now impossible to prevent the use of the drug, and if every child smoking marihuana was expelled or suspended, many classrooms would be denuded. There is evidence to substantiate this. Undisguised belief exists by the administration and faculty that legislation condoning use would result in a decrease in the amount of marihuana used and bartered.

The administration is strapped for funds. Ninety percent of its budget goes for salaries, leaving 10% for all other uses. Consequently, little money can be spent for special programs, including drug education. What is being done, therefore, is significant considering the modest staff and totally inadequate funding.

The Board of Education has provided a central staff of two persons and a secretary responsible for supervision and direction of the total program. The sheer impossibility of handling drug supervision in 150 schools, however, by two professional staff members is apparent. The program name, Family Life Education, refers not to drugs, but to social and health problems as related to the family unit, and is considered a subtle way of approaching widespread drug usage.

The elementary teachers, kindergarten through sixth grade, are responsible for drug education in their own classrooms. This is mandated by state laws. The teaching objective is to provide a basic knowledge of drugs and their use to their very young pupils, and relate them to family problems and their solutions. The teachers are expected to make full use of available community resources.

To assist the classroom teachers, the Board created a teacher-community leader task force to develop a teacher resource book. This book is widely used throughout the system. In addition, the Board provides optional training sessions for the teachers directed primarily at dealing with problems and their solutions.

Beginning with grade seven, there are special classes in drug education. At the eighth grade level, drug education is a part of the science course. The most significant programs, however, appear to be at the high school level. To these 30 schools, the Board has allocated \$2,000 per school for special drug programs. These funds have enabled one teacher in each of the schools to be freed from regular classroom assignments one hour a day to provide instruction in drugs and social problems.

Following are examples of two typical programs in the junior-senior high schools in the system.

The first school is an old institution of 2,500 students. Blacks form the largest number, but there are sizeable groups of Chicanos, Asians and white students.

The drug program, Health and Family Life Education, is aimed primarily, but not exclusively, at 10th grade students. Some students, on a voluntary basis, participate in the programs and from our observations, the older youth have a singularly salutary effect upon the younger ones. For the 11th and 12th graders, there are optional seminar programs.

Although it is true that all the students do not participate in these programs, there are opportunities for them to do so, and because of the interest in the classes and unusual skills of the teachers, attendance and participation are unusually high.

The Commission observed three classroom periods, 30 to 35 children per class. The convenor of the group was a mature woman, the wife of a civic and professional leader. She was asked to conduct the class because of her broad background, skill in handling an unstructured classroom, and the genuine warmth, affection and understanding she shows her students. Although, at least 20 years of age separate her from her students, the class was extremely informal and on a first-name basis.

The children in all three classes were encouraged to discuss any kind of a problem, and they did without hesitation and with complete frankness. As the title of the class implies, the discussions centered on family life and health. The three principal ingredients soon became obvious: parental conflicts, sex and drugs. The particular discussion observed was keyed to marihuana, but references to parents, family and sex were interwoven.

The sophistication of the children and their knowledge of all kinds of drugs were remarkable. Most of the children, although having witnessed drug use or being familiar with it, seemed determined not to run the risk of acquiring a habit or tempting death. Every child admitted having smoked marihuana, at least once, or using it on a regular though infrequent basis. Marihuana parties were reported as most common over the weekend, although a number of the children admitted that they might share in a drag on a marihuana cigarette sometimes once a day.

The leader requested 10 students to go to the blackboard and answer questions on marihuana ranging from the pharmacology of the drug through known health problems, addiction or non-addiction and the reasons why classmates used marihuana. The responses were factual and correct in almost every instance.

There was no lecturing about the evils of marihuana nor demands that it not be used. Neither

was there any encouragement for its use. The leader did try to bring enlightened reasoning to the discussion and subtly shifted the flow of thoughts from one point to the next.

The class was highly stimulating to everyone. The girls dominated the discussion and were more candid than the boys in describing the use of marihuana. They spoke in a matter-of-fact way, while the boys described its use in a humorous manner.

The second high school's program observed consisted of a leader and a peer group of 15 students, somewhat older than the first group, meeting on their own time after school hours. Again the leader was a highly knowledgeable woman who showed great skill and compassion for her group of young pupils.

This high school, like the first, has a high mix of ethnoses, but considerably more Asians than the first. Academically, it ranks high among all city schools.

The members of the peer group were self-selected. Some have had a drug problem including the use of dangerous drugs, and others were toying with the idea of experimenting with drugs. The leader permitted the dialogue to flow as it developed and only infrequently entered into the discussion.

The theme of the discussion was the inability of most parents of the peer group to understand or to communicate with them. This seemed particularly true among the children who came from families where parental respect has always been accepted, and where standards of conduct have always been rigidly defined and observed.

The youth complained that if they did seek advice or did try to confide in their parents about drugs and interpersonal matters, that only anger and denunciation resulted. They said that their parents could not understand that the world was rapidly changing and that their children were deeply involved in the change. The recitals of misunderstanding were the usual: racial, ecological, military, dress, drugs, permissive sex, impersonal living, and so on.

As with the first group, these youths freely admitted the use of marihuana and claimed they had suffered no ill effects. They also stated that pills of all descriptions were easily available, and used widely by the younger children.

A MIDWESTERN CITY

This city, like many on a railhead from the South, has undergone substantial population changes in the last 25 years. Once overwhelmingly white and imbued with a strong sense of tradition

and conservatism, the city has a steadily growing black population (45%) which is determined to take over its government and will probably do so in the next 10 years. The city, with a population between 500,000 and one million, is encircled by small, primarily white residential towns.

The school superintendent of this large city was not available for discussions, although he did authorize several very junior staff persons to meet with the Commission's representative.

Recently, the schools were surveyed to determine the use of drugs. The survey revealed that one out of six students in all grades used drugs for kicks and one out of four high school students. Except for alcohol, marihuana is the most commonly used drug and 71% of those admitting marihuana use claim that they were able to buy the drug at their own school. The survey revealed, also, that one-fourth of the students believe that marihuana should be legalized, although half the students indicated disapproval of such an action.

The major drug effort of the school district is to train classroom teachers to conduct the drug education classes. To advance this concept, the Board established a Drug Council to secure federal funds (\$300,000 which was subsequently allocated) and to develop training programs for its teachers and those in one outlying residential town. Except for providing space, the city Board has granted no funds for drug education.

The Drug Council and the director of the city-county drug program have developed a number of training programs. For instruction, the director has contracted with a number of professionals.

The selection of the teachers for the program was reported generally unsatisfactory. While the principals did designate a number of highly qualified individuals, they also nominated others because they were "problem people" or were the least valuable. There are no released periods for training and teachers consequently are required to use their own time for which they receive no remuneration.

Despite the best of intentions and a real knowledge of the community and its drug problems, the school administration had no information about programs in other cities that might have served as prototypes for its use.

Nor did the Federal Government advise the city about existing programs or how they might be used. As a result, all the funds were put in "one basket," where they very likely will accomplish questionable results. Members of the district staff said they had made many trips to Washington for advice and materials, but became discouraged after being shunted from one office to another. A strong conviction was expressed that the Federal Govern-

ment should have a central, coordinating office where drug information, materials, programs and advice may be secured.

Insofar as no comprehensive drug program exists in the schools, other significant projects have developed elsewhere. One is a Model Cities Program that stimulates considerable activity in drug education and related problems. The Model Cities Program claims that many heroin addicts who live in the inner city are ignored and the agency dispatches at least one car a day with addicts to an adjoining county for methadone maintenance treatment. Model Cities also has a well-developed drug information service and encourages broad citizen involvement.

The Commission's representative attended a meeting of concerned school and civic people to discuss what steps should be taken to handle the still growing drug problem. The meeting was chaired by a medical doctor from the city's health department.

The principal of one of the city's largest high schools bluntly rejected the idea that drug education was of value in his school. He did not want it. There were those who disagreed. The doctor, also head of the only free clinic in the city, was inclined to support the principal since he believed that neither parents nor teachers were prepared, nor had the required rapport with youth which enabled them to be effective. Rather, the medical doctor hoped to establish, in time, a series of free clinics in those neighborhoods where the incidence of drug abuse is particularly high.

A SMALL MIDWESTERN CITY

This small, working class, middle socioeconomic city has a population of 15,000. The majority of the residents are descendants of northern European immigrants who settled there 150 years ago. The city is characterized by neat blocks of housing, manicured lawns, parks and a well-maintained and adequately supported school system.

The school district like the city is old. It is proud of its early founders, each of whom has an honored place in the history of the schools. Many wealthy school systems could not begin to match its school buildings. Although old, they have been redone and refurbished. A sense of informality pervades the structures, faculty and students.

The town is a residential community in a large metropolitan area and affected by its cultural patterns and values. Drugs have moved into the town and now play an important role in the lives of the youth. While there are no known addicts, there is

a large usage of pills. Marihuana has become the "in" thing.

There have been no recent arrests, and the community people attempt to handle the problem in their own way. There did not appear to be any sympathy for marihuana smokers, but the practice has become too widespread to stamp out. Arrests and imprisonment are considered foolish and counterproductive.

In addition to a health and physical education unit that has some scattered reference to drugs, the system decided to train a number of teachers, who in turn could provide in-service training for others.

Four teachers attended a training program and now attempt in a very informal way to provide some facts and information to other teachers. Because no released time is provided, the work is voluntary and reportedly not too successful.

The specially trained teachers devote an hour, several days a week, during the elective period to an informal discussion of drugs. Actually, in the class observed, drugs were rarely mentioned, while family living was highlighted.

Most of the children were attentive. The teacher, a male, was apparently liked but displayed a lack of knowledge about drugs and social problems.

Only 15 students participated in the program that day. Most children were devoting their elective hour to art, music, dance, drama, sewing, gym or a number of other pastimes.

AN EASTERN RESIDENTIAL COMMUNITY

This community has a population of about 200,000, principally white middle class with a large number of professionals. The average family income is among the highest in the nation. The school system is generally considered to provide an excellent education for its 25,000 students.

As in many affluent communities, the youth have been in a "state of rebellion" against their parents. To the youth, the parents are "up-tight." The students demand a less formal education and one more relevant to their needs. They also believe that money is squandered on needless material goals while their beautiful wooded living area is being destroyed. They express their rebellion in long hair, nonconforming dress, and drugs.

In 1969, the police made over 200 arrests for drug violations and in 1970 the arrests rose to above 400. The police, however, reported that there were almost 2,700 known users in 1969 and that the number had risen to almost 6,000 in 1970. During the last year, there were a number of known deaths resulting from overdose of drugs.

The community responded to the need in 1970 by providing a quarter of a million dollars to inaugurate a program of drug education and rehabilitation.

The school administration and principals are reluctant to talk about drugs. Drug use appears to be an embarrassment to school personnel, and an embarrassment and outrage to the parents. Parents at first demanded swift apprehension and incarceration of youth involved in drugs and insisted that there be "law and order." Even the juvenile court was castigated, until many prominent parents discovered that their own children were involved in drug abuse. Since that time, there has been general relaxation of enforcement, particularly of marihuana laws, except for "pushers."

The Board during 1970 and again in 1971 provided an in-service training session for two teachers, K-6, from each elementary school. The trainees, selected by the principals, were to instruct the other teachers with the purpose of making drug education a regular part of classroom work. The Board provided the instructional materials.

In the middle schools, grade 7-9, the physical education teachers provide the drug education they consider proper in the regular health units. The Board also has provided instructional materials at this level.

At the senior high level, grades 10-12, physical education is not required and the responsibility for drug instruction rests with the classroom teacher. The Board again provides materials and the teacher is expected to integrate references to drugs in his discipline. For this group, there have been a few in-service programs.

The Board during 1971 did adopt a new policy on drugs stating the following:

- (1) The revised health education curriculum K-12 will be extended to all schools;
- (2) The Board will provide professional staff development opportunities in cooperation with local, state and Federal Governments; and
- (3) Teachers must report all incidents of drug use to principals, and law violations to enforcement authorities. Students involved will be suspended.

A LARGE EASTERN HIGH SCHOOL

The high school is but one in a large city school district, but merits special attention because of the nature of its drug education program.

The school enrolls 4,000 students. Once predominantly Jewish, it now is largely black and Puerto

Rican, with a mixed group of other minorities and whites. The school maintains a high pride in scholarship. The principal expects 95% of all his students to finish the term. Eighty percent of the 1,000 graduating students will go on to college. The SAT scores are only average running generally from 400 to 450, although the school has a number of extremely high scores.

The school operates with a minimum of friction. It was not always so, and during a period when the balance of whites and minorities was about equal there had been some trouble. One of the school officials observed that at least in his school, when the blacks and Spanish became a majority, the friction ended.

The school is clean, well painted, quiet, and the students seemed extraordinarily orderly. The principal has been in the school for 30 years and principal for the last few. He is an authoritative person, but not authoritarian, and seems kindly and just.

Drugs have been a real problem in the school for a number of years. Heroin is used by a small number. The popular drugs are said to be marijuana, amphetamines and barbiturates.

The school has the same drug programs as the other high schools, relying heavily upon health and physical education support and the use of drug information on an inter-disciplinary basis. But these have not been sufficient.

To temper the use of drugs, the Board suggested a special program with a full complement of nine professionals and para-professionals. The principal agreed. He also set aside two classrooms on the second floor and a modest basement room as an "executive suite."

The students have decided to call their group by a fraternal name. The 50 student members have all had a drug problem. They work not only with themselves but also with other students in the school who have problems, not necessarily related to drugs.

The students address each other as brother and sister and appear to have a genuine bond of affection. They seemed to know each other well and to take comfort in close association. Theirs is an example of group therapy operating within the school and carried on outside the walls through various social, art and recreational activities.

The students spoke easily and openly about their past habits and how this new association had made it possible for them to change. When questioned if all were off drugs, they replied that there were still three or four in the group who were not.

The staff members were intelligent and dedicated. They devoted full time to their responsibilities. One teacher-counselor was unusually dy-

namic. She said that she had spent the previous hour with nine girls in a very informal session. Their big "gripe" that morning had been their mothers. Whether there was any relation to drugs here was not revealed but it was explained that the team works on the theory that if they can get to the children's problems and help them, they will probably not turn to drugs or at least will use them in moderation.

The program as described and briefly observed was impressive for the following reasons:

- (1) Nine competent persons were devoting full time to serving the youth through counseling and group therapy, in addition to the regular counseling services provided by the school;
- (2) The team leader was highly competent;
- (3) The cadre of 50 students all subscribed to the concept and programs; and
- (4) Sufficient classrooms and an office were provided to handle the physical requirements.

A LARGE MIDWESTERN CITY

This city is the center of an industrial community of several million people. Heterogeneous in a real sense, this city is a melting pot of many nationalities, races and religions. For generations, it has been power dominated, and until quite recently the schools were directed by a Board representative of the industrial and commercial interests.

Drugs have always been widely used in the black ghetto areas, and heroin has been a problem for many years. The use of alcohol has also been remarkably high but was excused because of the nature of the community's industry.

The city and outlying areas have had a high incidence of drug addiction, and in recent years the rate has been increasing. Marijuana use has now become widespread and certain sections of the city including exclusive residential and shopping centers have become focal points of a drug subculture.

The Board has provided every teacher with instructional materials and resource books, but has left the administration and daily supervision of the drug programs to the physical education staff. Two women head the programs. One supervises the secondary girls' programs, and another supervises the elementary girls' programs. Both women are middle-aged, vigorous and knowledgeable. These women circulate throughout the system and assist the women gym teachers in developing programs and supervising their actions. This responsibility is in addition to their overall athletic

supervision, and consequently receives only a fraction of their time.

No overall supervision exists for the men gym teachers at either the elementary or secondary level and each gym teacher operates his own program independently.

An effort is made to provide 10 hours of instruction during the year, either in two consecutive weeks or spread throughout the terms. In most classes, the latter schedule is used to provide some long-term continuity.

The central office has no statistics on the use of marihuana and drugs in the schools. No census or study has ever been made. No central reporting system exists, and information is limited to an awareness that drugs are used and that some schools seem to have major problems. The general opinion was that marihuana was an accepted drug in many schools, while amphetamines and barbiturates seemed to be prevalent in others. The incidence of heroin use was not known, although it is generally considered to be quite high in the ghetto schools.

No referrals are made to hospitals or clinics by teachers or staff when drug problems among students develop. The matter is considered as one for the child's family to handle. Although the staff believes clinics should be available, the Board's position is that it neither has the funds, nor should it assume a medical responsibility.

Commission staff visited two schools, one elementary and the other secondary. Visits to the ghetto schools were denied, partly because there are no male gym supervisors, and partly because this city, like others, tries to conceal its serious problems. The administration agreed, however, that on a return trip with sufficient preparation, visits could be made to schools where the drug problems are major.

Actually, the seriousness of the drug problem in many of the city schools is well-known. In at least three predominantly black schools, heroin and other drugs are widely used as in any other large city. The system also has a number of schools of excellent reputation where marihuana is used openly by a majority of the students, many gifted and talented. The response to drugs in this school district is one of unwillingness to face up to the extent of the problem and to provide programs to counter them.

A High School

This is an old school, probably 40 years old, that serves a changing ethnic pattern in a lower-middle class district. The population is about 75%

white, 25% black. The school enrollment is about 2,000.

This school has had two deaths from an overdose of drugs in the last two years. It has also been the scene of a number of violent student disturbances; yet, the building is well-maintained and the discipline seems quite good. According to the vice-principal, alertness and constant policing by him and the teachers seem to have contained most problems, although he said that he could never be certain what might happen in the future.

The class visited was a group of 25 girls, aged 15-16. The discussion centered on marihuana, pills, and heroin. The teacher was well-informed and able to get quick responses. The students displayed little sophistication about drugs, however, and most of the responses were obviously from theory, not practice.

Assessing the use of marihuana in this school is difficult because the faculty believes that pills (red devils) are the problem. There is speculation that heroin use exists but no one appears to know to what extent. Apparent was the reluctance to reveal the depths of a very serious drug problem which baffled the school and to which it was not making an adequate response.

An Elementary School

This school was built 45 years ago, is in excellent condition, and is tightly administered by its principal. The school has 500 students from white working-class families.

The school discipline is rigid for dress and conduct. The principal was horrified when asked if drugs might be used in the school. She stated flatly that there were none in use and she would know if there were.

The class visited was for sixth and seventh grade girls. The subject was "Mother's Medicine Chest," presented by a skilled teacher. She had actual samples of some of the many bottles found at home. The discussion was an easy one between teacher and girls. There was no mention of marihuana and the hard drugs.

A STATE DEPARTMENT WORKSHOP

The Commission has received from the State Departments of Education and local school districts many references to teacher-training programs, most funded by the Federal Government.

As already discussed, the principal thrust of drug education at the elementary and secondary levels has been to train teachers through special conferences or workshops so they may later become the trainers of faculties in the schools or the dis-

tricts where they work. The principle is that of a "multiplier." Since funds at every governmental level are scarce, this concept is believed to be the most expeditious and successful.

While the Commission has attended only one such program and acknowledges that a fair analysis or criticism is hardly thereby justified, the reports to the Commission and the discussions with other administrators of training programs, as well as their participants, confirm what the Commission observed. Following is a report of this particular program in one state.

The state is large, wealthy and obviously concerned with the drug problem. As a result, the State Department of Education has established a Division of Drug Education and provided it with a small staff and modest funding.

The Department has published two well-written and interesting documents, one a teachers' guide and the other a students' handbook. The prime responsibility of the Division is to conduct workshops throughout the state and to provide within them the training that might equip the teacher to return to his own school or district and conduct in-service programs for his fellow faculty members.

The training programs are people-oriented and deal with "person problems," and yet subtly attempt to convey the drug message to teachers. Although great attention is paid to content, much of the training has to do with technique. Certain skills are displayed involving some sensitivity training, and also role playing.

The administrators of the program have a knowledge of drug problems and a desire to accomplish their objective: to train teachers. The voluntary staff, also, consisted of specialists well-versed in their subjects.

This workshop was a State Department of Education project to assist districts where drug use was high among school students. It was planned for a three-day period, early in the winter, at a conference center in the heart of a large metropolitan area. The state views these as regional meetings and this one consequently served five counties, including one with over a million inhabitants.

The state had sent letters to all school superintendents in the five counties requesting them to send carefully selected teachers to the workshop and explaining the responsibilities of the teachers to their districts upon the completion of the workshops. Yet, only 25 teachers attended this regional conference.

Most superintendents did not respond to the invitation. The state had also neglected to solicit

the assistance of the drug coordinator in the largest district which, as a result, was not represented.

The trainees included a large number of physical education teachers, a nurse, an English teacher, a science teacher and others. One male gym teacher complained that he had the responsibility for the total drug program in his district but that the physical education staff lacked classrooms and respect among the academic teachers. He said that he was selected simply because his superintendent considered drugs as his responsibility; other physical education teachers echoed his remarks.

The training classes turned out to be discussion groups, and complaints, questions, and concepts of the teachers flowed in an easy fashion. Most teachers expressed the opinion that they and their fellow faculty members knew very little about drugs; that they had never used them, nor had they taken college courses in them. They felt that they would not acquire too much precise, factual information in several days, and doubted their ability to carry on an effective training program for their fellow teachers at home. Most teachers also admitted that unless the superintendent ordered or the principal demanded, few teachers would be willing to give up their free time to attend more than one scheduled training session.

Perhaps the most striking admission by the teachers was that they felt that they would have difficulty in adjusting to the type of unstructured, informal style they knew was required to conduct effective drug programs and to secure the confidence and respect of their pupils.

Drug Education Programs of Special Interest

While the Commission has not evaluated any drug programs and is unaware of any program claiming singular success, a number have been found which are both unusual and experimental. The Commission believes that brief descriptions of several of these will help in understanding how a number of school districts and communities are trying to provide drug education classes to meet their own local needs. In practice, however, the programs are not always in accord with their concepts.

Descriptions of seven different programs follow :

SAN DIEGO, CALIFORNIA

DANes (Drug and Narcotic Education)

The Health Services Department of the San Diego City Schools, San Diego, California, has developed a program in drug education known as

DANE (Drug and Narcotic Education) for elementary, junior high and senior high students.

Drug Education has played a significant role in San Diego city schools for decades, as marihuana for 40 years has been a drug of wide usage. The study of drugs, however, had been included in brief units taught with such subjects as science, social studies and health education. The program had two weaknesses: (1) insufficient time, inadequate audio-visual aids, and unreliable resource materials, and (2) limited training opportunities and motivation for teachers.

In 1966, study committees of students, parents, teachers, nurses and administrators recommended that all teachers responsible for units on drugs should have in-service training; and special instructors who have unusual preparation and effectiveness should, through a rotation plan between schools, assist and supplement classroom teachers.

Action soon followed. The district provided a comprehensive in-service training program for teachers in which the health services played a major role. A number of other disciplines were involved so classroom teachers had a broad frame of reference in drugs and social problems. The DANEs, as the special staff became known, receive additional in-depth training, which substantially continues throughout the year. From this preparation, the following programs evolved.

ELEMENTARY SCHOOLS. The regular classroom teacher conducts drug units in the fourth, fifth and sixth grades. The emphasis is on healthy bodies and an understanding of what drugs can do to the body and mind, the building of positive values and the development of sound decision making.

At the request of the principal or teacher, DANE teacher-counselors are available to make brief presentations and to answer questions at the conclusion of the sixth-grade unit.

During the spring semester of 1970-71, a DANE pilot program was initiated in the sixth-grade classes. Trained secondary students with the assistance of a DANE teacher held discussions with sixth graders on drug abuse and answered questions regarding secondary school life. In the summer of 1971, six high school teams of 16 students enrolled for a unit of credit in the Work Exploratory Program. In addition to their elementary presentation, they meet monthly in each feeder junior school and with the senior high DANE.

JUNIOR HIGH SCHOOLS. There is in the seventh grade a unit on drug abuse in health. In the eighth grade, science courses offer a unit on harmful drugs. In addition, DANE teacher-coun-

selors meet with groups of 25 students or less for four days. Students are given facts about drugs and the impact of them on their personalities. A voluntary small group counseling service is also provided by DANE teacher-counselors. At the ninth grade level, general science includes a unit on physiology and the relation of drugs to the body.

SENIOR HIGH SCHOOLS. In the 10th grade, drug abuse information in the context of mental, physical, economic and legal implications is offered in health and safety education, and is integrated into the science and American Government classes.

During the 1970-71 school year, the DANE team on the basis of one DANE teacher-counselor for every two senior high schools assisted the regular classroom teachers. They also provided individual and/or small group counseling for pupils with drug-related problems. Although they function on their assigned school sites, they work with the cooperation of the principal and are under the administrative direction of the Health Services Department and the coordinator of the DANE program.

The value of DANE programs stems from the flexible, easy-flowing style of the "rap session" with a nonstructured approach. Equally important is that DANE teacher-counselors are not a part of the school faculty on each site. Thus, they claim easier communication and closer rapport with the students. Community consultants (ex-addicts) also are believed to form an essential part of the class presentation and reach, in a meaningful way, some students who might not develop confidence in the "rap sessions" with the DANE teacher-counselor. Parent and community support have been outstanding.

SAN FRANCISCO, CALIFORNIA

Peer Influence

The San Francisco City Unified School District believes that young people are more likely to be influenced by other youth than by their parents.

Thus, the district designates a selected group of secondary students, including those with extensive subjective experiences with harmful substances, to visit community agencies and talk with personnel (medical, law enforcement, judicial, rehabilitation, etc.) who handle young people having problems leading to or caused by drug misuse or abuse.

These students serve as sources of information on drug abuse among their classmates as well as

younger students in junior high schools and upper elementary grades.

One feature of the district community program includes discussion leaders from the Barristers' Club, Medical Society, Police Department, and nontax-supported agencies in a concerted effort to prepare teachers and parents to understand and assist with preventive education related to drug misuse behavior patterns.

Drug Abuse Prevention and Family Life Education

The San Francisco Unified School District has a program, Health and Family Life Education, in both elementary and secondary schools.

The goals are identical, "... the achievement and maintenance of optional physical, mental and social health, self-responsibility, and social responsibility in personal, familial and community relationships."

ELEMENTARY SCHOOLS. Drug education is assigned to four subjects: health, science, social studies and language arts.

The instruction stresses human reproduction and sexuality as natural aspects of personal, family and social health. Information is presented within a framework of moral, ethical and societal values.

SECONDARY SCHOOLS. Health education classes are given in the three junior high school years which include physical, mental-emotional and social changes which characterize the transition between childhood and early adolescence. Social studies also are in each of the three grades and deals with individuals, ethnic groups, cultural background, the family as a social institution, and moral and ethical values.

The stressed *Family Life Education* course is taught at the 10th grade level. Regular classroom teachers are supplemented by lay instructors from the community who are selected because of their training, broad educational background, love of children and skills in conducting nonstructured classes.

The family is studied as a basic social institution. Students explore means of improving communication between generations and become aware of the wide range of competencies they need to acquire before taking on the privileges and responsibilities of adulthood, marriage, and parenthood. The social, mental, emotional and biological adjustments of adolescence are investigated, as are threats to optimal growth and development such as experimentation with alcohol and potentially hazardous drugs, the expression of the sex drive outside of marriage, early and forced marriage,

and venereal disease. The course includes a study of the relationship between good maternal health and care and the development and birth of a healthy baby.

These classes highlight health, family life, individual's needs and ethics, but a strong current of subtle references to drugs runs throughout. The teachers are particularly well-qualified, especially at the 10th grade level, and discuss in the most meaningful way any problem which may relate to or bother the youngsters in the classroom.

NEW YORK CITY

SPARK (School Prevention of Addiction through Rehabilitation and Knowledge)

The SPARK Program is administered by the Office of Special Education and Pupil Personnel Services in the Board of Education of the City of New York. Its central office consists of a director, titled drug coordinator, and a staff of 12 persons. It became fully operational at the opening of the fall term, September 1971.

SPARK includes the following:

1. **DRUG EDUCATION SPECIALISTS.** Each of the 93 city high schools has a drug education specialist. Eighty-five received intensive training during May and June 1971 by the Addiction Services Agency and Board of Education personnel. They serve as a catalytic agent under board mandate to mount an effective drug prevention program in their assigned schools.

2. **PEER GROUP LEADERSHIP PROGRAM.** SPARK has funded 16 faculty facilitators to work with 16 existing peer groups in as many high schools.

3. **INTERVENTION AND PREVENTION CENTERS.** SPARK has placed Intervention and Prevention teams in 12 high schools. The teams consist of a guidance counselor (Pupil Personnel Services) a social worker and/or psychologist, an attendance teacher and a professional worker from the home high school. Each team also has four paraprofessionals and a unit secretary.

The schools' Consultative Council selects the personnel and SPARK office central staff upon review accepts them.

The SPARK teams function full time working with 350 to 400 students in each school. The schools have identified most of the students as drug prone. They include two broad groups.

(1) Students who have experimented with marijuana, cocaine and other drugs; this group does not include any with a high heroin habit

who are instead referred to existing community treatment centers.

- (2) Students who have indicated extreme manifestations of adolescent development problems. The team works with these youth through small group interaction. Young people are encouraged to delineate their problems, identify their goals, explore options open to them and the consequences flowing from such options and then select a non-self-destructive behavioral attack strategy. SPARK hopes that this process will prevent many youth from turning to drugs as a solution.

4. STREET WORKER PROGRAM. SPARK provides the Youth Services Agency with funds for a Street Worker Program for four to six high schools in the city. This program focuses on the drug program as it exists in the immediate vicinity. The street worker relates to the personnel of the school and to SPARK's coordinator.

SPARK is an expensive program. The nine professional members assigned to each school in the Intervention and Prevention Centers have a budget approximating \$100,000 a year. This does not include the space assigned for administration and "rap sessions," "unstructured teaching or counseling." The State of New York's Narcotics Addiction Control Commission has been the primary source of funds for the SPARK Program. During the school year 1971-72, the Commission will provide several million dollars.

CORONADO, CALIFORNIA

Student Centered Curriculum Organization

The staff and teachers of the Coronado Unified School District use the Carney Risk Taking Attitudinal Questionnaire, which identifies with a high degree of accuracy, potential high risk behavior, and relates the results to the deprivation and/or enhancement of eight universal values (Lasswell) which then indicates the best approach for each teacher during the school term.

Through the "value-sharing" technique taught in in-service workshops by the University of California, teachers of all grades, subjects and disciplines develop cognitive materials concerning behavior (drugs and dangerous substances being a part) and blend this with the affective domain (values, attitudes, responsibility, decision-making) so as to make each class personalized and relevant to each student.

Each part is evaluated with special instrumentation developed for its process and for which workshop training is provided.

Finally, the school district and city council operate a multi-phase community-parent information and training program with youth involvement at each step as well as special workshops for resource teachers (district school nurses) and counselors.

LOS ANGELES, CALIFORNIA

DARE (Drug Abuse Research and Education)

DARE, one of the earliest drug programs, developed in response to the sharp increase in 1965 in Southern California in the number of persons with symptoms following LSD ingestion. The rise in the use of other drugs: marijuana, methedrine (speed), STP, barbiturates, etc. followed rapidly.

DARE was and is unique. It did not develop in a public school district, but rather at the University of California at Los Angeles' (UCLA) Neuropsychiatric Institute because of an expressed community need.

The hope of DARE is to prevent teenage drug abuse among the many curious and uncommitted youngsters who have yet to make the decision whether they will seek a drug solution to their problems.

DARE consists of teenagers who form a peer group where the pressure is toward alternatives to drugs—music, work, personal relationships and other interests. None of the youth are ex-users and they do not preach to other youngsters but offer themselves simply as role models. They try to persuade parents to separate fads, such as long hair and psychedelic dress fashions, from the dangers of drug abuse. DARE youths have received much establishment recognition which has helped to build self-esteem by serving on the California State Drug Training Team, representing youth on the Governor's Drug Abuse Council and in other activities, and they are currently supported by a Criminal Justice grant.

Educators, medical doctors, parents, students, law enforcement personnel and the mass media have sought DARE's assistance, for it has become evident to most petitioners that a total community effort is required to combat the drug problem.

DARE is essentially a volunteer movement. A group of professionals works with adolescents, all volunteers, on research projects, clerical tasks, film production and instructional materials. In public, the youths represent DARE on panels and serve as resource personnel.

They have displayed their several creative exhibits before many groups and have staged a "Happening" before 5,000 on the UCLA campus. The youthful volunteers have also created psychedelic art for many materials which DARE distributes worldwide. "Rock Music and the Drug Scene," an insightful take on drug music for adults, is one of their major, innovative education resources.

Some 75 DARE teenagers have produced a film, *Beyond LSD*, which received the Chris award (first place) for health education in the Columbus National Film Festival for 1968.

DARE's method is a challenge and a "dare" to parents and youth. To the former, it is a "dare" to look hard at themselves and their use of alcohol and medicine cabinet drugs, to examine their own fears and prejudices against long hair and non-conforming behavior patterns, and to understand their role in the breakdown of communications. To the latter, it is a "dare" to seek solutions other than drugs to the anxieties of growing up, to take the time to see what the experts say about marijuana and other abused drugs.

DARE believes that community action can result in educating youth about the drug risk factor, understanding why youth turn to drugs, and then utilizing all necessary community resources to combat their use.

DARE is a total community effort.

ALEXANDRIA, VIRGINIA

Behind-the-Scene

Alexandria has developed a comprehensive drug education program whose key word is concern. The concept is that the educational, health services and other vital and related agencies be integrated in the approach to and handling of the drug problem in their northern Virginia community.

Within the last two years, the City Council appointed a Drug Commission which represents every division of city government. The Alexandria Mental Health Center was instrumental in providing leadership in drug treatment, volunteer services and securing expanding funds. It also fostered the development of a successful therapeutic drug treatment center, Second Genesis, and was responsible for introducing drug education into the schools.

Interested parents, civic leaders and professionals rallied behind the efforts, and assisted the school system in bringing the drug problem into proper focus and perspective.

The Women's Auxiliary to the Alexandria Medical Society, Children and Youth Committee, devoted a year and a half to assembling the best thinking and research on drug abuse education. Working with school administrators and teachers, the auxiliary produced a curriculum and a resource book.

The school system's concern now goes to the area of implementation of teacher training in drug abuse education, providing new curricula guides in drug abuse education; working with other community agencies, and organizing a program of vigilance and a new awareness in the individual schools in Alexandria.

The Curricula in the Schools

ELEMENTARY: K-6. The curriculum at this level provides concepts that suggest learnings and activities designed to understand one's self, friends, and family better. Termed *Emotional Understanding and Decision Making*, it introduces concepts of self-respect, responsibility, goal-making, and decisionmaking at a simple level.

The curriculum stresses satisfying personal relationships and a sense of self-esteem so that youth may grow successfully in a complex society. The curriculum also presents the concepts of good health and dietary habits, as well as the hazards of smoking, dangerous household substances, and poisonous plants.

As the child advances, the curriculum deals with over-the-counter and prescription drugs.

Presentations of this curriculum are not made in blocks of time, thus permitting extreme flexibility

GRADES 7, 8, 9. The teachers are required, working in teams, to incorporate in all subject areas and disciplines references to and instruction about drugs. The time necessary for units is left to the team chairman following the guidance of the team members.

GRADES 10-12. No special programs exist in drug education, but the high school has counselors and psychologists for individual consultations and "rap sessions." These consultations and non-structured programs draw large numbers of students who are given maximum opportunities to discuss candidly any kind of a problem bothering them.

The Board of Education provided mandatory drug training for all teachers two years ago, and in-service training has continued at each school building.

There are PTA programs, in addition, for parents and townspeople that have had a salutary ef-

fect upon developing a community understanding of the drug problem.

Marihuana Education in State Programs

The Commission sought from the State Departments of Education information as to the relative treatment of marihuana and other substances in their drug education programs, and their views and opinions about marihuana's use and importance in their respective states. Following are digests of answers received from the Departments of Education in each of the states and territories:

Alabama. According to the Department of Education, alcohol and tobacco should be included in drug education programs. This alleviates the hypocrisy of talking about "their drugs" and forgetting "ours". . . . The Department believes that while all drugs should be studied separately, they should be classified collectively. The Department also believes that one should not differentiate between marihuana use and drug abuse.

During the fall of 1971, the Drug Education Section of the Department in cooperation with the Health and Physical Education Section was preparing a teacher's guide for health education. To be included were sections on alcohol, tobacco, dangerous drugs and narcotics. The guide appeared to have no special reference to marihuana education in any program.

Alaska. The Department of Education's Consultant on Health Education made the following statement: "Marihuana use is widespread . . . as it is elsewhere, but is not considered a problem by the young people. My own feelings, which others have stated more eloquently, is that our time, effort, and money would be better utilized in the more serious abuse problems. Marihuana is probably incorrectly classified as a psychedelic; it is not a narcotic and is pharmacologically more closely related to the sedative-hypnotic nitrous oxide than anything else."

In the *Source Book on Drug Abuse* provided by the Alaska Department of Education, references to marihuana appear at the conclusion of the document in a quote from author James A. Michener: "What I am saying is this: Marihuana doesn't lead to heroin, but the gang with whom you smoke it may. Marihuana is not addictive; the social atmosphere that surrounds it is, so that it can be argued 'marihuana does lead to heroin,' but not in the sense we usually imply."

The manual also refers to David Smith, M.D., a pharmacologist who made a case for removing

marihuana from the hallucinogens category and classifying it as a sedative-hypnotic. His reasoning is that overdose of marihuana results in coma and respiratory collapse, consistent with the sedative-hypnotic overdose pattern, rather than convulsions which result from overdose of hallucinogens.

The manual takes this position about the substance: "Marihuana is the cause of the greatest strife. However, it is not the intent of this Department to argue for or against legalization as opinions vary greatly among individuals and communities."

Arizona. The Department of Education reported: "A majority of school districts in Arizona had no drug abuse preventive programs and has little or no idea how they could approach the problem. Those school districts claiming they had a program were teaching only cognitive information about drugs with little or no effect."

The Department admits that the state's proximity to the Mexican border provides an available supply of drugs of all types which are offered to the secondary as well as elementary students.

In January 1971, the Department published a statewide plan for drug abuse prevention in Arizona. The primary goal is to provide every elementary school child with essential information and to accomplish this, the state proposes workshop training of elementary school teachers from every district in the state. There is no evidence of any special programs on the use of marihuana in Arizona schools.

Arkansas. The Department of Education reported: "Drug abuse in Arkansas is still somewhat of a minor problem as far as most of the public is concerned, but there is an increasing amount of involvement that is not reaching the public eye. It seems to be only a matter of time before this involvement will surface. . . . A short time ago, marihuana and a few pills seemed to be the thing. Now there are increasing reports of hard narcotics entering the state and of intravenous injections of amphetamines. . . . There is still a problem of apathy on the part of many people, and especially administrators who have little direct contact with students . . . finally, we must solve the problem of a shortage of teachers in the area of drug abuse education."

The *Resource and Curriculum Guide: Drug Education* has a special section on marihuana which covers botanical aspects, medical uses and research, and the extent of the problem. The section also relates a number of myths about marihuana and gives factual answers. There is no evidence that marihuana is treated any differently than any other drug.

California. The State Department of Education makes these observations about marihuana: "This office is not responsible for maintaining systematic data about the levels of use of any specific drugs. . . . Marihuana appears to be continuing its trend of being a widely used drug, although all reports indicate that alcohol is our major drug of abuse. Levels of heroin addiction appear to be increasing dramatically, and LSD remains with us, although under many other names. . . . Marihuana rates have risen, but much less than between 1968 and 1969."

In the document, *Drug Abuse, a Source Book and Guide for Teachers*, marihuana is described as are all other drugs. Portions of the guide are devoted to the subject of marihuana, but there are no special references or treatment given the drug. A review of a number of publications issued by school districts in various parts of California indicates the same impartial treatment.

Colorado. The Department of Education reported the following:

"Many elementary age students seem to use more inhalants while junior high students try marihuana, barbiturates, and some hallucinogens; and senior high students try marihuana, some heroin and cocaine, as well as amphetamines, barbiturates, and hallucinogens.

"Some areas of the State have noted greatest experimentation with drugs at the junior high level whereas in other areas, the heaviest use is at the senior high level. Generally, alcohol and marihuana appear to be the substances experimented with or used most by the greatest number of youth.

"Drug problems do exist in Colorado schools but the schools are still in confusion as how to handle the problem. We have only just begun to make headway in this most sensitive issue."

In the publication, *Drug Education Handbook*, distributed by the Colorado Department of Health, there are several pages devoted to marihuana. The subject deals with a description of the plant, its medical uses and psychological and and physical effects and concludes: "Many people use marihuana as casually and infrequently as light social drinkers use alcohol; for others, marihuana may be an important and integral part of a multi-drug abuse way of life."

Connecticut. The Department of Education, in conjunction with the Department of Mental Health has a booklet titled *Services for the Alcohol and Drug Dependent Person*. It is principally a reference manual.

No evidence in the material submitted by the Department of Education indicates that marihuana receives special attention in any program.

Delaware. The Department of Education uses a commercially produced drug education program. No special reference is made to marihuana and there is no indication that the state provides unusual attention to the drug. The basic view is that marihuana and other abused drugs must be put in perspective with other drugs, medicines and poisons that are potentially dangerous and harmful to the individual and society.

Florida. The Department of Education has issued a publication, *Alcohol . . . Narcotics Education*. There is reference to marihuana within the document but only in a minimal way. As far as can be ascertained, Florida schools do not devote special emphasis to marihuana.

Georgia. The Department of Education published *Viewpoints—Drug Use, Misuse and Abuse*. The booklet, which discusses all the known abused drugs and includes references to marihuana, states: "The cheapest, easiest and also one of the most frequent ways of developing drug habituation is to begin by smoking marihuana. It is conventional to ascribe the association of the two drugs (heroin and cannabis) to the mutual influence of availability in illegal society. No doubt this is one important point of contact, but there are others which the addicts describe."

Nonetheless, no evidence indicates that Georgia has developed or is using special educational programs dealing with marihuana.

Hawaii. Marihuana is rather widely used in Hawaii and efforts are being made in the state legislature to legalize the use of the drug.

A newspaper article in August 1971 stated that "present selective enforcement of the marihuana laws was worse than no enforcement at all. . . .

"Youths were arrested and prosecuted while those members of Hawaii society who smoked pot at cocktail parties were never bothered, one man said."

The Department of Education offered no evidence that marihuana is a particular problem or that it provided any courses dealing with the drug.

Idaho. A 1970 state survey indicated that 0.9% of grade seven males and 8.7% of grade 12 males used marihuana and 0.5% grade seven girls and 3.9% of grade 12 girls had used marihuana.

The State Department is developing syllabi for teachers but gives no information relative to marihuana inclusion.

Illinois. In the fall of 1971, the Department of Education released a booklet, *Teaching About Drug Abuse*. The booklet will serve as a guide for grades K-12.

The 147 page booklet includes a two page reference to marihuana. The material is factual. The state indicated that the drug will be dealt with in regular programs covering all drugs.

Indiana. The Department of Education has been developing guidelines to be printed in late 1971. There is no indication that Indiana provides or intends to provide special programs in marihuana use.

Iowa. The Department of Education does believe guidelines for drug education are necessary. Each school district must develop its own program. The Department estimates that 75% of its secondary schools has provided some kind of information but virtually nothing at the elementary level. No evidence indicates that marihuana is treated as a separate problem in the schools.

Kansas. The Department advises that marihuana and LSD are the most abused drugs. No state teaching syllabus exists and individual districts are left to develop their own guidelines. Marihuana does not appear to be handled separately from the other drugs.

Kentucky. The state law requires schools to provide information on drug education but the state provides no overall plan. In late fall 1971, the Department was still developing guidelines. There is no evidence that marihuana is treated separately from other drugs.

Louisiana. Louisiana has had one year of experience in drug abuse education. There is no evidence of marihuana being treated separately in any program.

Maine. The state does not require elementary and secondary schools to provide drug education courses. The Department hopes that local districts will respond to local needs. No evidence indicates that marihuana is treated differently from other drugs.

Maryland. The State Department during the late winter of 1971 was developing teachers materials. Marihuana will be handled on the same basis as all other drugs.

Massachusetts. The Department advised that a majority of schools teach drug education, sometimes relying upon the developed health education curriculum guide. The curriculum includes references to marihuana but no special attention is given to the drug.

Michigan. The Department of Education states: "We do not have a departmental policy in regard to marihuana and have indeed suggested to schools that there is no need for schools to take a position

on the substance since they do not have the power or authority to legalize it or alter the penalty in regard to it. We do suggest that students be encouraged to discuss the matter and that they be told the means by which laws can be changed in our society."

The Department has proposed guidelines for school programs and awaits action by the State Board of Education for their use. To date, no special programs dealing with marihuana appear to exist.

Minnesota. The Department is revising units which should be available for instruction during the present year. While marihuana is referred to in the proposed program, no special attention seems to be given the drug.

Mississippi. The Department has neither developed a guide nor intends to. It considers the state still rural, having a minimum number of problems with all drugs except alcohol which already receives major attention in Mississippi schools. There is no reference to marihuana.

Missouri. The Department advises: "The use of drugs by students is quite extensive in the metropolitan and urban areas of the state, with less extensive use being made by students of the rural areas. The use of alcohol is reported to be by far the worst problem among the student population. A number of student surveys have been conducted which indicate a use of drugs by students being from 10% to as high as 65 or 70% of the student population." There are no separate marihuana programs.

Montana. The Department of Education was unable to appraise the drug situation in the state and advised that mandated teaching becomes effective during the 1972-73 school year. Little is being done in drug education currently with no reference to marihuana.

Nebraska. The State Department reported: "We have less of a drug problem in Nebraska than in more urban areas of the country. . . . Nebraska is just starting on attacking the drug problem, and a review of progress next year at this time would yield far more usable information."

There is no reference to marihuana in the curriculum.

Nevada. The Department has developed materials selected from wide sources dealing with drugs. There is reference to marihuana but no indication of special programs.

New Hampshire. The Department of Education is developing plans for community involvement in drug programs.

Individual districts have prepared their own teaching syllabi. A report on drug abuse stated: "The Criminal Intelligence Unit of the State Police Department reported that seizures of marihuana in 1970 skyrocketed 2,200 percent over the year before. The major drugs used, other than marihuana, seem to be mescaline, LSD, and amphetamines. The CIU feels that heroin use in New Hampshire is limited to experimenters."

No special marihuana programs appear to be given in the state.

New Jersey. The Department of Education provides an instructional manual for grades K-12 which has within it portions dealing with marihuana. No evidence indicates that special attention is paid to marihuana in drug education.

New Mexico. The Department of Education advises: "... an understanding of the proper niche for marihuana is the key to placing other illegal drugs of misuse in perspective. Marihuana is to illicit drugs what aspirin is to home medicines. Parents and other "establishment" persons fail to recognize that marihuana is not the deadly drug it is reputed to be when used and not abused. On the other hand, marihuana users refuse to admit that it has any harmful physical, emotional, psychological, social or legal effects."

The state does not provide special programs in marihuana education.

New York. In New York, marihuana is considered in the larger population areas as a drug of minimum harm, although widely used. Many references on the use of marihuana and its effects exist within state educational material but there are no special programs to our knowledge dealing with marihuana.

Most state education efforts as well as district efforts concentrate on the use of heroin, cocaine, amphetamines and barbiturates.

North Carolina. The State Department of Education reported: "There is no official position on the part of the State Department of Public Instruction in regard to drug education courses. There are state laws requiring the teaching of health (including drug abuse) in public schools, but the precise methods by which drug abuse is dealt with are left to the discretion of local school units."

The Coordinator of Drug Training Programs is opposed to "specialized drug education courses." The state does not provide special attention to marihuana and treats it simply as one of the drugs to be considered.

North Dakota. The Department advises that 30% of all children in grades 7-12 has experi-

mented with marihuana. One percent of all children in grades 7-12 are regular users of marihuana. The drug traffic in the state consists mainly of "marihuana, amphetamines, and hallucinogens."

The State is currently preparing a curriculum but there is no evidence of special attention to marihuana.

Ohio. The Department reported that the General Assembly has enacted a statute requiring education of the abusive use of drugs, alcohol and tobacco. Currently, extensive curriculum development is being conducted. There is no information that marihuana has or will be treated separately from other drugs.

Oklahoma. The Department of Education has just completed publication of *Drug Education Curriculum Guide*, which contains references to marihuana but no special emphasis is placed on the drug.

Oregon. The Department has an extensive program in drug education. It has also distributed to all schools an extremely well-defined teachers' guide and resource information.

Although marihuana is included as a narcotic within the legal classification, specific references to marihuana treat it as a relatively minor, less serious drug than the others generally abused.

No special attention is given marihuana in any program.

Pennsylvania. The Department of Education in 1970 issued conceptual guidelines for school health programs including references to drugs. While there are several notations on marihuana, no special treatment is accorded the drug. In context, it plays a relatively minor role.

Rhode Island. The Department of Education advises that teaching about alcohol, stimulants and narcotics is mandatory in the elementary and secondary schools of Rhode Island. The Department advises further: "... because the possession, sale and abuse of certain drugs is illegal ... the drug action becomes clandestine. Family court, however, has noted a marked increase in drug related offenses ... in the past few years and the offenders are getting younger."

In another communication the Department states: "... the implications of the title of your Commission are indicative of a built-in bias on the subject of marijuana. There is a growing number of Americans who would take immediate objection to your implied relationship between marihuana and 'drug abuse.'"

While there are references to marihuana throughout many of the materials surveyed, no special program seems to be devoted to the drug.

South Carolina. The Department of Education has not started to develop curriculum guides nor does it provide educational materials dealing with marihuana.

South Dakota. The Department of Education advises that the drug problem is not as severe as in many states but that marihuana is probably the most popular drug used by students. There is no evidence that there are special programs on marihuana in any schools.

Tennessee. The Department advises: "It is our general appraisal that the drug problem is being handled as well as possible with the present resources. Much needs to be done, however, before the problem is sufficiently reduced."

A proposed guideline includes references to marihuana but only in a minor way.

Texas. The State Board of Education is preparing materials on drugs and does refer to marihuana in a number of instances. No special attention is paid to marihuana, however, and it is treated in conjunction with all other drugs.

Utah. The State has developed a number of materials dealing with drug education in which marihuana is included but no programs exist exclusively on the drug.

Vermont. The State has no programs, as far as is known, on marihuana.

Virginia. The Department has developed new materials relating to health education. However, only minimum references are made to drugs and no special programs on marihuana exist in the elementary grades.

On the secondary level, marihuana is treated with the other drugs but is given no special emphasis.

Washington. The Department of Education has developed a number of programs and materials dealing with drug education. Marihuana is included, but in a minor way.

West Virginia. The State has only recently started to develop guidelines and resource materials. There are no state programs on marihuana and none reported at the local level.

Wisconsin. The State is planning programs in drug education but as far as can be ascertained has no special programs designed for marihuana.

Wyoming. The Department advises: "At the present time there would appear to be growing

acceptance that Wyoming youth may be, and indeed are, confronted with the drug problem. . . . It has been observed that many of the successful school programs have had the active support, encouragement and assistance of community service groups."

No programs on marihuana are given in Wyoming.

American Samoa. Samoa does not currently have a drug instructional program although the government is preparing a health instructional guideline for the system. Samoa states that there is no evidence of drug abuse in the school system but is determined to develop a preventive program.

Canal Zone. While marihuana is a common drug in the Canal Zone, it is referred to only modestly by educational authorities. There are no special programs on marihuana, as far as could be determined.

District of Columbia. The District of Columbia does provide limited programs in drug education with a few references to marihuana, but offers no special programs on the substance.

Guam. There are no special programs on marihuana in Guam.

Mariana Islands. Marihuana is not a drug of consequence in the Islands and, consequently, there are no programs.

Puerto Rico. There are a few current drug education programs in Puerto Rico but marihuana, a substance widely used, receives minimum attention. The few programs that are concerned with health education include no known references.

Virgin Islands. Marihuana is grown openly in the rural areas and widely accepted by youth. There are no current education programs for marihuana or any other drug.

Surveys of College Drug Courses

As one of its initial efforts in the two-year study and inquiry into drug education programs in elementary and secondary schools, the Commission sought information on the kinds and numbers of programs which universities and colleges were providing teachers, professional workers and community leaders in drug education.

From the outset of its inquiry, the Commission realized that teaching about drugs was a matter of singular importance. The field is a complex one because the study of drugs themselves is so demanding, and any discussion of drug usage must

be interrelated to a number of other social and health disciplines. The Commission soon discovered that most school districts confessed having few teachers actually qualified to conduct drug programs. A sudden concentrated effort to provide in-service training began in 1970, but the results have been generally unsatisfactory. While these programs provide some assistance, they are rarely more than a week or two in length and attempt solely to provide the substantive highlights of content and type of instruction required in classroom work.

Superintendents, principals and teachers advised the Commission that in-depth professional drug courses at the university level were essential in order for a classroom teacher to secure the proficiency demanded in the drug field. It also seemed apparent that as drug use spread from school to school, large numbers of teachers would be required to spend more time in the classroom and community teaching about drugs and directing new types of programs aimed at controlling their use. These teachers would need a level of sophisticated training that has been unknown in most health educational courses.

For those currently preparing for the teaching profession, educational administrators urged that undergraduate programs should provide meaningful instruction in drug programs and teaching techniques. The need was apparent that expanding drug educational opportunities, both undergraduate and post baccalaureate, were needed in every state in the union.

To obtain a realistic understanding of what was actually happening, the Commission requested the National University Extension Association (NUEA) to make a survey of marihuana and drug education programs offered during the 1970-71 academic year by the extension and continuing education divisions of all its member institutions. The survey included the 172 national, public and private universities having adult credit and non-credit programs.

Responding were 117 institutions (68% of those surveyed) from 46 of the 50 states, excluding only Delaware, Hawaii, Nevada and Rhode Island.

The data covered extension and continuing education at all campuses, extension centers, sites and other public and private facilities in which the institution conducted programs to the extent that programs at these sites and facilities were administered by the respondent.

The survey requested information for both credit and non-credit programs as well as source of funding: federal, state or local, combination of

public sources, participants or private groups, and other. The survey requested from the institutions the program format, teaching staff, the type of audience, as well as number of registrations.

No attempt was made to identify the public audience reached by radio and television educational broadcasts dealing with marihuana and drug abuse programs, although there is a reference to the number of programs broadcast by the institutions themselves.

SIGNIFICANT FINDINGS

1. Program and Participant Totals

Of the 117 institutions responding, 71 indicated they provided programs in drug education and 46 offered no programs. The 71 institutions conducted a total of 256 different programs in 884 sessions reaching well over 76,000 participants during the 1970-71 academic year. Seventy-three programs gave academic credit to the participants; 141 were non-credit classes and 42 did not indicate whether the program was credit or non-credit.

2. Outreach

Most of the drug education programs were offered off campus, totaling 667 sessions or 75.5% of all sessions.

In many instances, institutions revealed a remarkable capability for reaching multiple audiences, measured in terms of times offered. Following is a table indicating the number of institutions that offered the same program five times or more. One institution offered the identical program 500 times.

Times offered :	No. Institutions
5 -----	2
8 -----	1
10 -----	1
15 -----	1
20 -----	1
28 -----	1
36 -----	1
38 -----	1
70 -----	1
100 -----	1
127 -----	1
200 -----	1
500 -----	1

3. Major Program Efforts

A number of programs portray in greater detail the outreach capabilities of a number of institutions of higher education.

The University of Missouri offered five different programs for audiences ranging from 4-H and church groups to medical professionals. One program, designed for medical professionals involved in drug abuse programs, was held on the campus of the medical school. In all, 45 sessions attracted 1,303 participants. All other programs were held off campus in various parts of the State. The four sessions allocated to 4-H and extension group members drew a total of 2,153 participants; there were 200 sessions for teachers, PTA members, and for parents and youth in secondary schools. These drew 10,009 individuals. Finally, 100 training programs for professionals on drugs reached 2,841 participants, and 20 sessions for civic and church groups covered 627 participants.

THE UNIVERSITY OF WISCONSIN developed a program on "Drug Classification and Awareness" and administered it in 127 different locations within the state.

FERRIS STATE COLLEGE trained a Student Drug Abuse Information Team and provided a drug abuse information program for 37 high school and college audiences totaling 7,800 persons.

WEST VIRGINIA UNIVERSITY developed a program, "The Why of Drug Abuse," in each of the state's 55 counties between December 1970 and June 1971. Approximately 15,000 persons attended the 500 sessions.

PENNSYLVANIA STATE UNIVERSITY developed a broad band of programs in various fields: "Drug Abuse," "Health Topics," "Spectrum," "Learning Development Training Center on Drug Abuse," "Drug Workshop," "Leadership Development Course on Drug Abuse Education," and the "Drug Problem—Role of the Physician," and in addition sponsored town meetings on drug abuse in Williamsport, Somerset, Lewistown, Johnstown, Huntingdon, DuBois, Clearfield, Altoona and Bellefonte.

The survey acknowledges that similar capabilities by national public universities exist in every state of the nation. If most state universities do not provide such programs, it is only because of lack of direction, management and education funding.

4. Funding

The individuals or the private groups who participated in the programs provided in most instances funds for program support. This included most of the programs offered. The Federal Govern-

ment provided funds for the fewest number of programs.

Source of funding	Number of programs	Percent
Fully federally funded	7	7.5
Fully state or locally funded	14	15.0
Funded by a combination of public sources	10	10.7
Fully funded by participants or private groups	36	38.7
Funded by a combination of public and private sources	16	17.2
Other	10	10.7

The survey finds that although there was no systematic federal funding of drug abuse education programs during the 1970-71 academic year, the overall high level of participant funding clearly points to a large potential desire for reliable and factual information about marihuana and drugs within many groups including teachers.

5. Program Content

Only one program was reported to have specifically dealt with marihuana. Every other program reportedly dealt with various drugs including marihuana. Of the 227 reported programs, 65% dealt with drugs generally. In the programs dealing with general drug abuse, the references to specific drugs in percentages of programs were as follows:

Drug:	Percent of programs
Marihuana	44.9
Depressants	41.9
Stimulants	42.7
Narcotics	43.6
Glue	31.7
Hallucinogens	41.4
Alcohol, tobacco	40.5

Evidently, neither educators nor participants view the drug problem in terms of one single drug. At this stage of the educational process, drug abuse education programs provide information about all drugs currently used or abused.

6. Characteristics of Audiences

During 1970-71, all the audiences involved in drug abuse education programs were highly mixed in regard to age, sex and education. Medical professionals, teachers and youth formed the largest groups in programs designed for single audiences.

Type of audience :	Percent of programs
General	61.2
Medical	9.8
Teachers	5.1
Youth	5.0
Law Enforcement.....	1.2
Church	0.9
Business	0.7
Women	0.2
Legal	0.2
Labor	0.1
Civic	0.1
Other	16.0

7. Sources of Requests for Programs

Civic groups, state governments and teachers formed the largest identifiable source, in that order, requesting continuing education programs on drug abuse from the universities. The pervasive concern about drug abuse is reflected in the large number of different kinds of groups requesting such programs.

Who requested :	Percent of requests
Civic	27.3
General or unspecified.....	28.4
State governments.....	18.4
Teachers	10.5
Universities	4.9
Law enforcement.....	2.0
Medical-pharmaceutical	1.2
Church	0.9
Local governments.....	0.5
Federal Government.....	0.1
Other	15.7

8. Program Format

A variety of program formats were offered by the universities, due in part to the credit and non-credit features as well as the overall objectives. Many of the programs were for small single groups or for large audiences in a single meeting. The findings of the survey indicate that professional expectations require a far different approach than general information programs for mixed and lay audiences.

Program format:	Percent of programs
Single meeting.....	33.5
Seminar—Workshop	31.6
Formal course.....	7.6
Lecture	4.3
Conference	3.4
Short course.....	2.0
Educational TV-Radio.....	0.6
Lecture series.....	0.2
Other.....	16.8

9. Teaching Staff

The institutions of higher education surveyed provided the largest source of teaching staff;

58.9% of the drug education faculties were from the responding institutions or a sister institution.

Source of teaching staff:	Percent of programs
Own institutions.....	58.1
Other institutions.....	2.8
Civic, business, professional groups.....	12.7
Federal, state, local governments.....	1.8
Combination	19.3
Other	7.3

10. Unfilled Requests

Many institutions, 17 (23.9%) of the 71 reporting, advised that they had rejected requests for drug abuse programs during the past year for the following reasons: 13 for lack of funds, eight for lack of qualified instructors and six for a variety of other reasons. Some institutions gave several explanations why they could not accept requests for drug abuse programs.

11. Plans for the Future

A majority of the institutions reporting, 62 (87.3%), stated that they plan to conduct programs during the 1971-72 academic year. Of the 46 reporting institutions which did not conduct programs last year, 9 (19.6%) stated that they planned to develop and conduct programs during the next academic year. Forty institutions indicated that they plan new or enlarged programs during the coming year.

Traditionally Black Colleges

During the fall of 1971 and at the request of the Commission, Federal City College (FCC) and the National Association of Black Adult Educators (NABAE) made a survey of marijuana and drug education programs offered during the 1970-71 academic year by the traditionally black college and by a number of urban universities providing educational services to large minority groups.

The Commission expected that the NUEA survey would, by reason of the nature of institutional clientele, reveal drug education programs offered predominantly white groups. The Commission, was also interested in having a responsible land grant institution, Federal City College, Washington, D.C., whose faculty and student body are overwhelmingly black, and the National Association of Black Adult Educators, whose membership is scattered throughout both black and white institutions in the nation, survey the extent of drug education programs offered minority teachers and community leaders.

The surveying agencies sent 115 questionnaires to the traditionally black colleges and 360 ques-

tionnaires to a selected number of major urban universities. These included schools in every state and the Commonwealth of Puerto Rico. A number of religious schools were included in the survey in order to gain some knowledge of their attitudes towards the rising use of drugs among minority people.

Of the 115 colleges surveyed, 37 (31%) responded. Of the 37, however, 24 indicated that they offered no programs in drug education. Only 13 indicated that they were providing drug programs.

The 13 traditionally black schools offering programs, even though few in number, did state that they had 5,604 individual registrations for their offerings.

Urban Schools Serving Minority Population

Of the 360 major institutions surveyed, 144 (40%) advised that they offered drug programs to 50,452 individual registrants, many from minority groups.

The report states that the audience reached was a mixed one, including teachers, students, civic leaders, law enforcement personnel, as well as representatives from the Federal, state and local governments. Faculty members were generally selected from the institutions themselves, although professionals in the non-academic world also served as instructors.

Most programs were given off campus. No breakdown between credit and non-credit work was reported.

In a few instances, marihuana was given individual treatment although in most programs, marihuana was considered with the other drugs. These programs received a minimum of federal funding. Most colleges surveyed reported they did not offer drug programs because of serious lack of funding. A number of institutions in large urban centers, including the District of Columbia and New York City, heavily populated with minorities, provided no programs of any description.

The survey noted that there is either an omission of drug educational programs or a reluctance to report them in the black community. Two reasons exist why this situation prevails. One, a number of the black colleges failed to respond, expressing a lack of confidence in the work of the Commission itself. Second, most black colleges, due to their weak financial condition, are unable to offer drug education programs to minority teachers and community leaders unless underwritten with adequate funding.

The two surveys by NUEA and FCC-NABAE of undergraduate and continuing education divi-

sions at institutions of higher learning offering drug instruction for teachers and community leaders substantiated the Commission's own findings (CMDA Survey 1971). Relatively few institutions, only 71 out of 172 in the NUEA Survey, stated that they offered drug programs at the post-baccalaureate level. These institutions conducted on the average only slightly more than three different kinds of programs, a majority of which did not grant academic credit.

As might be expected in continuing education classes, most were held off campus. While these programs apparently did offer opportunities for drug instruction in many localities, the Commission is concerned whether there are a sufficient number of on-campus programs which may be available to graduate or professional students, many who customarily attend classes on the campus.

Although 76,000 persons participated in these programs, when the several million teachers and para-professionals who have responsibility for drug education at the elementary and secondary levels are considered, the conclusion seems to be that the number is inadequate. Moreover, the participants are concentrated in a few states, with remaining states having insignificant numbers or in some instances no faculty participants.

Funding, undoubtedly, is a major problem in the development of these programs. Both surveys revealed that the participants themselves or the private group to which they were attached provided the major source of funds. Where interest is high and incomes sufficient the demand for instruction probably meets some of the need, but in many parts of the country, teachers and concerned persons apparently will not spend their own money for this type of program. The states do provide some funds but only a mere fraction of the total cost, and the survey disclosed that the Federal Government provided even less funding.

The surveys did reveal that the largest number of participants were, significantly, teachers, youth and medical professionals, where instruction of this kind unquestionably has a desirable impact. Similarly, most of the requests for drug programs come from civic groups, state governments, teachers and a general mixture of citizens.

One of the positive factors reported was that the faculty tended to come from the survey institutions or sister institutions. Clearly, university faculties are a real potential source for instructors, and the institutions and the professional skills of the instructional staff are available if called upon. The surveys also indicated that most of the schools were planning to offer new or expanded programs in the coming year.

Both surveys, particularly the one by FCC-NABAE, did point out that in the large urban areas where professional training is most needed, relatively few programs exist. This can only mean that large urban school districts having many minority students among whom drug usage is high, do not have adequate opportunities for securing professional drug training for their faculties. Where the drug problem is most severe, educational programs in the public schools seem to be weak, and where the drug problem is moderate, because of available professional assistance programs, education programs seem to be better structured and have more specially trained instructional staff.

Little doubt exists that professional drug programs for teachers are needed in every state and many local jurisdictions, and that particularly the large urban school districts would benefit from the development of such programs for their teaching staffs and community leaders. While the universities have the faculties and professional staffs, it is apparent to the Commission that they have not been utilized fully in developing and offering professional drug programs to the countless classroom teachers now needing such assistance.

The Federal Government and Drug Education

The Federal Government has had a long interest in drugs and their abuse and has provided over the years substantial support in several principal categories of drug programs; treatment and rehabilitation, research, law enforcement, and more recently education and training.

Several federal agencies are engaged in education and training, although many of their programs tend to be informational in nature. The Office of Education in the Department of Health, Education, and Welfare has been charged with the principal responsibility for developing and supporting educational programs in cooperation with the State Departments of Education and their thousands of local school districts.

Early in 1970, at the specific request of the President, the Office of Education inaugurated a state grant program designed to assist the training of educational personnel within the school districts in order to combat the drug abuse problem. Beginning in fiscal year 1970, the Office of Education on a formula basis allocated to the states \$2,864,000, and in the following fiscal year, 1971, another \$2,000,000. The Office of Education also funded during the first year 28 community projects totaling \$2,341,000 and 19 college-based projects total-

ing \$659,000. In addition, 11 school-community based projects were supported by \$1.3 million in funds appropriated under Title III (Supplementary Educational Services of the Elementary and Secondary Education Act).

The Bureau of Higher Education funded programs at 14 institutions of higher learning involving a number of community colleges. The Bureau made 13 education project grants, ranging from \$2,000 to \$25,000, totaling \$102,103 and one training project grant to Alabama A & M for \$68,000 to assist in training personnel in drug education in eight Alabama black colleges.

As the problem grew, so did the level of federal funding. From \$4.2 million expended by the Office of Education in 1970-71, the support program reached \$13 million for 1972, and a similar amount is budgeted for fiscal year 1973.

The emphasis and direction of these programs are changing as new needs become apparent. The thrust for the current and subsequent year will not be focused solely on the training of teachers, but will begin to stress the development of leadership in communities and their follow-up assistance requirements. The new program is called *Help Communities Help Themselves*.

The Office of Education will allocate in response to accepted proposals \$2,000 to \$5,000 exclusively and specifically for the support and the training of teams of five and six individuals at training and support centers located in eight geographical regions. The Office of Education will select and train at least 600 teams.

These dispersed training and support centers will provide the team members with skills which should enable them to return to their communities with the ability to determine the local drug problem, assess and mobilize their communities' resources, and develop a coordinated program for responding to their communities' drug problem.

The training cycles are planned for two weeks with a week hiatus before resumption. They will be residential, and during the first year, about 3,300 trainees will move through the program. The Office of Education will also attempt to provide assistance to groups who fulfill the criteria specified but do not receive grants.

The training programs will consist of the following components:

1. Improving the individual's capacity to act within the community by providing him with current knowledge on drug education;
2. Assisting the individual in gaining experience in relating to others; and
3. Stressing the community "system" to which the team will return.

Once the training has been completed and team members have returned to the community, additional services will be provided by the training centers as specific local needs are identified.

The team members are expected to be interdisciplinary and represent a diverse background. They should have demonstrated some leadership and have open communication to the local institutions and power structure. Finally, each person should have an interest in drug use or be motivated to work toward a solution of the drug abuse problem. The Office of Education believes that at least one team member should be directly involved with elementary and secondary education, such as a superintendent, a principal, board member or an influential teacher. The Office also believes that a youth age 16-22 should be on the team.

The participants will not return to their communities as trainees, but as groups to organize programs for the communities, each designed according to the needs of the people who live there.

The eight training centers will receive \$300,000 each for administrative support and professional services or a total of \$2,400,000. The 600 teams will require between \$2 million and \$3 million for their maintenance.

The Office of Education will also continue the State Education Department formula grants totaling \$2 million; the 20 college-based, student initiated and student administered projects calling for \$700,000; the 26 community-based projects totaling \$2.3 million; and the 11 school-community based projects with Title III funds of \$1.3 million.

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AN ANALYSIS OF STATE DEPARTMENTS' OF EDUCATION ROLES IN ADMINISTERING DRUG EDUCATION PROGRAMS

Table 1

STATE EDUCATION DEPARTMENTS

DRUG EDUCATION CLASSES

State	Type of Training and Leadership	Curriculum Guide-lines	College Programs for Teachers	Elementary	Secondary	State Provided Resource Materials	Comments
Alabama	2-day workshops for selected teachers; self-evaluation of previous year's program	Developing teachers' health education guide	None	Drug education required in certain grades	Drug education required in certain grades	State provides course of study	Department reports having made in-roads but "much more to be done"
Alaska	Area in-service training programs	None	Alaska Methodist University provided one in the summer of 1971	Most schools have some form of drug education	Most schools have some form of drug education	Source Book on <u>Drug Abuse</u>	Drug education is new to the state; programs will be developing and improving
Arizona	Teacher training workshops throughout the state	None	Virtually non-existent	State legislation seeks implementation of drug abuse education programs	State legislation seeks implementation of drug abuse education programs	None developed	Drugs are a major problem but most current efforts relate to planning for the future
Arkansas	The Department cooperates with the state police and Department of Health. These agencies provide for training of teachers. 3-day workshops given in regional centers.	Yes	State-wide drug education classes	State recommends programs	State recommends programs	K-12 Resource & Curriculum <u>Guide</u>	Emphasizing teacher training
California	In-service training throughout the state	<u>Drug Abuse, A Source Book and Guide for Teachers</u> ; materials developed locally	State-wide cooperation; drug education classes	Required in all elementary schools	Required in all secondary schools	Miscellaneous resources provided	State training coordinator and staff primarily concerned about in-service training. Virtually full district responsibility for drug programs

STATE EDUCATION DEPARTMENTSDRUG EDUCATION CLASSES

State	Type of Training and Leadership	Curriculum Guidelines	College Programs for Teachers	Elementary	Secondary	State Provided Resource Materials	Comments
Colorado	Department evaluating past programs; intends to develop a comprehensive state plan	Proposed for 1972-73	Survey being conducted	107 of 181 districts providing programs	District responsibility	<u>Drug Abuse Handbook</u>	Planning just getting started
Connecticut	35 training programs	State provides materials but no syllabi	11 colleges provide training	State law requires drug education at least annually in grades above 5	Required grades 9-12	<u>Services for the Alcohol and Drug Dependent Person</u>	Programs principally a local responsibility; drug problem more prevalent but public interest waning
Delaware	In-service training for all school districts	Curriculum guidelines being developed	No information	Law mandate programs commenced school year 1971-72	Mandate programs	<u>Social Health Problems</u>	Emphasis on training teachers, administrators and lay citizens
Florida	In-service training throughout state	Under development	Developing regional training centers	State mandate K-8	State mandate 9-12	<u>Alcohol... Narcotics Education</u>	State aims at broad community action
Georgia	In-service training throughout state; state funds for student scholarships	None; local responsibility	Cooperative throughout state	Law requires districts to provide drug education starting grade 5	Law requires 8-12	<u>Viewpoints, Drug Use, Misuse and Abuse</u>	Primarily local responsibility
Hawaii	In-service training and leadership teams in every district	<u>School Health Education Study Program K-12</u>	University of Hawaii cooperates	State-wide K-8	State-wide 9-12	<u>School Health Education Study Program, K-12, a commercial document</u>	State gives priority to in-service training
Idaho	Workshops in 6 areas; state coordinator appointed	Developing syllabi	Colleges cooperating	Local responsibility	Local responsibility	None	Reliance upon community building programs
Illinois	25 Seminars throughout state 1970-71	<u>Teaching About Drug Abuse</u>	Colleges cooperating	State mandate	State mandate	<u>Teaching About Drug Abuse</u>	State's primary concern is coordination of existing programs

STATE EDUCATION DEPARTMENTS

DRUG EDUCATION CLASSES

State	Type of Training and Leadership	Curriculum Guidelines	College Programs for Teachers	Elementary	Secondary	State Provided Resource Materials	Comments
Indiana	In-service training	Developing guidelines for late 1971	Colleges cooperating	State mandate date 4-9	State mandate date 10-12	None	Reliance upon community program development
Iowa	In-service training	None; believe necessary	University of Iowa cooperates	Few programs at local level	Estimate 40% offer programs	None; recommends NIMH material	Reliance upon districts developing programs
Kansas	State-wide 2-day workshops	None	Kansas University cooperates	Local initiative	Local initiative	None	Reliance upon districts developing programs
Kentucky	Regional workshops	Developing guidelines	Colleges cooperating	State mandate	State mandate	None	Reliance upon local districts to develop programs - considerable variance
Louisiana	Conferences with deans of colleges of education to discuss drugs	None	Undergraduate	Local - K-6	Local option	None	Reliance upon teachers and communities
Maine	Programs for teachers and community leaders; assistance in developing guidelines	None; local responsibility	No regular programs	Local option	Local option	None	Recent establishment of Maine Commission on Drug Abuse; need for Federal assistance
Maryland	4 regional training programs	<u>Assimilated Substances K-12</u>	Being surveyed	State mandate 5-8	State mandate 9-12	Parents: Some Facts About <u>Drug Abuse</u>	Department uses multi-agency approach
Massachusetts	Seminars for teachers and community leaders	<u>Health Education Curriculum K-12</u>	Colleges cooperating	State recommends 1-7	State recommends 8-12	None	Department endorses group sessions at secondary level and peer programs

STATE EDUCATION DEPARTMENTS				DRUG EDUCATION CLASSES		
State	Type of Training and Leadership	Curriculum Guidelines	College Programs for Teachers	Elementary	Secondary	State Provided Resource Materials
						Comments
Michigan	Focus on teacher education	None proposed	Colleges cooperating	Local option	Local option	Drug Use & Abuse; Drug Education Curriculum Grades K-12 suggested
Minnesota	In-service education for teachers	None; local responsibility	Law requires teacher training in drugs	State required	State required	Drug education required since 1923; local curriculum responsibility
Mississippi	Workshops for teachers, students and parents throughout the state	None	Undergraduate	Local option	Local option	Alcohol... Un-solved Problem
Missouri	9 regional training centers for teachers and community leaders	Task force developing guidelines	None	Recent law requires some form of drug education	Recent law requires some form of drug education	Current programs weak and limited from K-12
Montana	Reviewing state's needs	None	Mandate undergraduate 1972-73	Mandate 1972-73	Mandate 1972-73	State just beginning to take inventory of problem
Nebraska	Summer workshops and in-service teacher training	Proposed for Jan. 1972	Colleges cooperating; primarily undergraduate	Mandate Sept. 1972	Mandate Sept. 1972	Department not familiar with state situation; currently local responsibility in education
Nevada	In-service training for interested teachers	None	Colleges cooperating	Local option	Local option	Selected kits, films, etc.
New Hampshire	Developing plans for community involvement	Proposed	Colleges cooperating	Local option	Local option	None
New Jersey	Workshops throughout state	<u>Suggested Drug Education Teaching Units, Grades K-12</u>	Colleges cooperating	Local option	Mandate Grades 7-12	None
						State planning and leadership just developing
						Recent state interest

STATE EDUCATION DEPARTMENTS

DRUG EDUCATION CLASSES

State	Type of Training and Leadership	Curriculum Guidelines	College Programs for Teachers	Elementary	Secondary	State Provided Resource Materials	Comments
New Mexico	6 regional workshops in teacher education	Drug Education Course of Instruction for 7th Graders	Colleges cooperating	Mandate grade 7 1970-71	Mandate grades 8-12 1971-72	None	Emphasis on school and community support in drug education
New York	In-service training throughout state; regional workshops and development of computer-based resource units in health education	Prototype Regents program: I - 4, 5, 6 II - 7, 8, 9 III - 10, 11, 12	Colleges cooperating; college programs for teachers; drug education classes	State mandate	State mandate	Computer-based resource guide & miscellaneous materials	Strong state program with high local responsibility
North Carolina	State believes specialized programs counter-productive	None; local responsibility	Modest cooperation	Local option	Local option	Drug Abuse Education, a handbook for teachers	Reliance upon local initiative; state mandates health programs
North Dakota	Seeks community cooperation	State developing curriculum	Minimal	Local option	Local option	None	Admission of late concern and effort to catch up
Ohio	In-service training for teachers throughout state	Assists in developing local materials	No information	State mandate	State mandate	Family Life Education Survey of Ohio Schools and Human Persons & the Use of Psychoactive Agents, Student Rap Sheets & Teacher's Manual	Reliance upon local districts to develop programs
Oklahoma	Department in awareness stage; training programs for 500 educators completed	Drug Education Curriculum Guide	Principally undergraduate	Local option	Local option	None	Department beginning to plan
Oregon	State workshops for teachers, students and community leaders; development of materials	Toward Responsible Drug Education I. K-4 II. 5-9 III. 10-14	Colleges cooperating	State mandate	State mandate	Miscellaneous available	Department providing strong leadership and encouraging local concern
Pennsylvania	8 workshops reaching 950 teachers and administrators	Conceptual Guidelines for School Health Programs	Colleges cooperating	State mandate	State mandate	Minimal	Modest state support; lack of funds

STATE EDUCATION DEPARTMENTS				DRUG EDUCATION CLASSES			State Provided Resource Materials	Comments
States	Type of Training and Leadership	Curriculum Guidelines	College Programs for Teachers	Elementary	Secondary	Variety		
Rhode Island	Workshops; creation of advisory committee	<u>An Educational Program Dealing With Drug Abuse</u>	Colleges cooperating	State mandate	State mandate	State supports an action program		
South Carolina	Workshops	None; local responsibility	Minimal	Minimal local	Minimal local	Department relies upon community awareness programs		
South Dakota	State requires drug education in at least 4 grade levels	None	Undergraduate	Primarily local initiative	Primarily local initiative	Drug programs are integrated in other courses		
Tennessee	10 - 4-day conferences	<u>A Suggested Approach to Drug Education at the Local Level</u>	Colleges cooperating	Local option	Local option	Department lacks information; modest response to drugs		
Texas	Central staff of 5 with 20 regional service center personnel for statewide coordination	Local responsibility	Colleges cooperating	State mandate 5-8	State mandate 9-12	Teachers' Handbook on Drug Education, Crime and Narcotics; and Parents Booklet About Drugs		
Utah	Department seeking emphasis on personal and social problems	<u>Drug Abuse and Health</u>	Colleges cooperating	Mandate local responsibility	Mandate local responsibility	State encourages development of strong programs		
Vermont	Workshops for teachers	No health education syllabus	Undergraduate	Local initiative--organizing programs	Local initiative--minimum number	Relatively little action		
Virginia	In-service training for teachers	1. <u>Health Education Grades K-7</u> 2. <u>Health Education Grades 7-12</u>	Colleges cooperating	State requests appropriate programs	State requests appropriate programs	Reliance on local program development with state assistance		
Washington	26 workshops throughout state; creation of task force	<u>Drug Education for the 70's</u>	Colleges cooperating	Local option	Local option	The department is anxious but lacks funds		
West Virginia	State provides only requested materials	Developing guidelines for teachers	No information	Local option	Local option	State leadership is very modest		

DRUG EDUCATION CLASSES

STATE EDUCATION DEPARTMENTS

State	Type of Training and Leadership	Curriculum Guidelines	College Programs for Teachers	State Provided Resource Materials			Comments
				Elementary	Secondary		
Wisconsin	Department developing policies and programs	Advisory panel developing guidelines	Colleges cooperating	Local option	Local option	None	Recommends using National Clearing-house materials and American School Health Association materials
Wyoming	Workshops for teachers	Local responsibility	University of Wyoming	Local option	Local option	None	Reliance upon districts to develop own programs
American Samoa	Developing plans	None	None	None	None	None	No known drug activities in schools
Canal Zone	Conferences for teachers	None	None	Local school option	Local school option	None	Serious problem demanding a great deal of time
Dist. of Columbia	Workshops for teachers	Being developed	Undergraduate	5-8 but not uniform	9-12 but not uniform	<u>Health & Family Life Education</u>	District has no well-developed programs in operation nor does it provide leadership
Guam	In-service teacher training	None	None	Local option	Local option	None	Rising use of pills; plans to develop a syllabus
Mariana Islands	None	None	None	None	None	None	Wide-spread chewing of betel nut although marhuana has just recently been introduced
Puerto Rico	Developing plans	Developing	No information	Local option	Local option	None	Growing problem; department moving slowly
Virgin Islands	Developing plans	Under preparation	No information	Local option	Local option	None	Minor response to drugs

Table 2

**DRUG EDUCATION GRANTS
OFFICE OF EDUCATION**

	FY '70	EPDA* FY'71	FY '71
Totals	2,864,520	600,000	2,000,000
Alabama	58,004		33,650
Alaska	40,000		23,200
Arizona	40,000		23,200
Arkansas	40,000		23,200
California	60,000	150,000	121,800
Colorado	41,164		23,850
Connecticut	49,099		28,500
Delaware	40,000		23,200
District of Columbia	40,000		23,200
Florida	82,948		48,100
Georgia	69,864		40,500
Hawaii	40,000		23,200
Idaho	40,000		23,200
Illinois	62,353	75,000	79,650
Indiana	74,845		43,400
Iowa	48,297		28,000
Kansas	43,105		25,000
Kentucky	53,150		30,850
Louisiana	62,540		36,250
Maine	40,000		23,200
Maryland	59,439		34,450
Massachusetts	74,549		43,250
Michigan	119,499		69,300
Minnesota	60,621		35,150
Mississippi	46,144		26,750
Missouri	66,783		38,750
Montana	40,000		23,200
Nebraska	40,000		23,200
Nevada	40,000		23,200
New Hampshire	40,000		23,200
New Jersey	91,347		53,000
New Mexico	40,000		23,200
New York	61,338	140,000	116,600

**DRUG EDUCATION GRANTS
OFFICE OF EDUCATION**

	FY '70	EPDA* FY '71	FY '71
North Carolina	75,056		43,550
North Dakota	40,000		23,200
Ohio	62,901	75,000	80,000
Oklahoma	44,287		25,700
Oregon	40,000		23,200
Pennsylvania	60,012	80,000	81,200
Rhode Island	40,000		23,200
South Carolina	49,183		28,550
South Dakota	40,000		23,200
Tennessee	60,368		35,000
Texas	65,330	80,000	84,300
Utah	40,000		23,200
Vermont	40,000		23,200
Virginia	68,471		39,700
Washington	53,952		31,300
West Virginia	40,000		23,200
Wisconsin	65,812		38,150
Wyoming	40,000		23,200
U. S. Service Schools	---		---
Samoa	20,000		---
Guam	20,000		14,000
Puerto Rico	54,079		31,350
Virgin Islands	40,000		23,200

***Education Professional Development Act, Title III.**

IV: Future Research Needs and Directions

The preceding chapters indicate that although a great deal is known about the medical and sociological aspects of marihuana consumption, important gaps in our knowledge do exist. This chapter outlines specific research needs for the further study of marihuana, and the direction marihuana research should take if there is to be an expansion of knowledge in this area. In preparing this section, the Commission consulted government and private agencies, all of which were helpful in indicating the important research areas and the kinds of research that should be conducted.

The suggestions and recommendations are outlined under three headings: biomedical, psychosocial, legal and law enforcement.

Biomedical

Although research has been conducted in the medical field, many questions remain unanswered about the effects of marihuana on humans and the pharmacological aspects of marihuana.

Botanical Studies on Potency

The determination of delta-9-tetrahydrocannabinol (THC) content of different strains of

marihuana used in Asian and African countries, and the different effects these strains produce, is a matter requiring international cooperation in research. A large number of samples from different areas of the world are needed and a procedure for selectively monitoring the delta-9-THC content of marihuana strains in different localities over a period of years is required.

Study of the "shelf life" or the rate of loss of the active component in marihuana is an important research area. The amount of active component present when an individual buys the drug, and how much remains when he uses it, should be known.

Synthetic Psychoactive Compounds

Researchers are now able to synthesize delta-9-THC, but there is a need for continuing research on the synthesis of the metabolites of cannabis breakdown products. Synthetic supplies of these components are needed to study the metabolic transformations of cannabis, and the structure of the metabolites in detail.

One of the critical pharmacologic questions is the relationship between delta-9-THC, currently believed to be the principal psychoactive ingredient in marihuana, and other cannabis constituents.

Whether these substances have psychoactive properties, toxic properties, or perhaps interact with delta-9-THC to produce some of the psychoactive effects attributed to marihuana is not yet clear.

Dosage and Modes of Ingestion

Research on the relationship of response to dose and to route of administration is also needed. While smoking is the predominant mode of ingestion of marihuana in the United States, in other countries marihuana is commonly ingested by eating or drinking. In comparing the effects marihuana has on individuals in different countries it is essential to know whether and which differences are attributable to modes of ingestion, and which to dosage size. The relationship of these dosage variables to response must be elucidated. In addition, most marihuana research projects have been one-dose studies. It is necessary to study the effects of cumulative dosages on volunteer subjects over longer periods of time—for weeks and months.

Animal Studies

An animal model in marihuana research is required for two reasons: first, to stimulate the human type of marihuana ingestion—smoking; and second, to conduct certain studies on the metabolism of delta-9-THC, which require observations of the accumulation of delta-9-THC and its metabolites in various organs.

Effects on Brain Function

Further basic research on the metabolism of marihuana and its effects upon brain function is essential. Some investigators have recommended the study of the effects of marihuana on cortical and subcortical functions. Other questions about marihuana and brain function center around the possibility of marihuana causing brain damage. Although the evidence is slight, such a possibility merits attention. This research can be undertaken in both animal and human populations. Studies investigating the relationship between marihuana smoking and mutagenic effects on the human fetus are of importance, particularly those focusing on smoking during pregnancy, the rate of birth defects, and spontaneous abortions.

Marihuana and the Use of Other Drugs

Because marihuana is often combined with the use of other drugs, effects of combinations of marihuana and drugs such as alcohol, or LSD should

be known. These polydrug interactions cannot be predicted from the effects of each drug individually, and must be studied in detail for each possible drug combination.

Long-Term, Heavy Use

Because the United States has relatively few long-term, heavy users, the few studies which have been conducted have been of populations in other parts of the world. What is now needed is to expand and improve such studies of long-term users. Although these studies would not be directly applicable to the American situation, they might provide information which could be useful in providing the necessary context for better understanding what is happening in our own country. While we expand studies abroad, we should also study long-term, heavy use in the United States. This requires locating and studying the small sample of users who have been smoking heavily over an extended period of time; and initiating longitudinal studies of smokers who have been recently introduced to the drug culture.

Higher Risk Populations

A neglected area is the study of the effects of marihuana on people who have physical or mental disorders. Marihuana's effects on these individuals may be substantially different from its effects on normal, healthy subjects.

Longitudinal studies should focus on areas of interest to medical practitioners. The effects of marihuana on the cardiovascular and pulmonary systems are of primary importance. Studies in this area should assess not only the effects of marihuana on "normal" hearts and blood vessels, but should detail the effects of marihuana on those with cardiovascular disease, or older populations with less adequate cardiovascular functioning. Study of the effects of long-term, heavy use of marihuana on the respiratory system is also needed, especially since smoking is the primary mode of ingestion in the United States. Studies anticipating tobacco-type problems must be executed.

The evidence for marihuana as a cause of psychosis is confusing. Some cases occur in Eastern literature, but the precise role marihuana played in the pathogenesis is difficult to determine; that is, was it the "cause," a precipitating factor, or merely incidental because marihuana smoking has occurred more frequently in segments of the population with a higher rate of psychoses. Again, prospective studies would supply vital information in this critical area.

Although there have been scattered reports, systematic study of acute, adverse reactions to marihuana are quite limited. Detailed studies in this area would greatly increase understanding of the marihuana experience.

Therapeutic Uses

Although analgesia, anticonvulsant action, appetite stimulation, ataraxia, antidepressant, and antibiotic properties of marihuana have been known for some time, little systematic study of the therapeutic use of marihuana has been undertaken. Some evidence indicates that marihuana might be of therapeutic value in the treatment of glaucoma, migraine, terminal cancer, and high blood pressure; also, that it might be of value in the treatment of psychiatric patients (particularly those depressed or anxious), alcoholics, and drug addicts. Obviously, the therapeutic efficacy of marihuana will be determined by its therapeutic usefulness; its lack of undesirable side effects; difficulties in administration; and its comparative therapeutic utility with other known and accepted pharmacologic agents.

Psychosocial

Expanded Epidemiologic Studies

Psychosocial research on marihuana encompasses a wide range of issues and problems. Basic to understanding this aspect of marihuana use are epidemiologic studies. Although these studies have yielded important information about the marihuana-smoking population, they have focused upon use in middle class college students or other young people. Researchers have become aware of the need to study other segments of the population. Research on middle class adults as well as working class youth and adults might yield quite different patterns of use. Because most studies have been conducted on white youth, there is also a need for epidemiologic studies of marihuana consumption by other ethnic and racial groups including blacks, Mexican-Americans and Puerto Ricans.

Prospective Studies—Polydrug Use

Little information is available about the patterns of marihuana use. Long-term prospective studies are needed which will indicate whether the individual "progresses out" of marihuana use after a certain period of time, or "progresses on" to other

drugs, and if so, which ones. Attention should be focused on the relationship between marihuana use and the use of legalized prescription drugs, since most research has focused rather narrowly on the link between marihuana and other illicit drugs. In addition, it is important to study the possible life history antecedents of marihuana use, such as socialization and child-rearing patterns, and the role of life events (graduation, marriage, first job, etc.) on cycles of marihuana consumption.

Effects on Socialization

The study of marihuana smoking in social groups should be expanded. Most studies investigate the effects of marihuana smoking on individuals, although in the natural setting most smoking occurs in groups. It is desirable to assess the effects of group interaction in producing the reported pleasant, introspective aspects of marihuana smoking. Other aspects of set (feelings of anxiety or relaxation) and setting (home, party, school) and their role in inducing reported marihuana effects should also be studied.

While most research has been directed at determining the harmful effects of marihuana, almost nothing is known about its beneficial or positive social effects, if any. Most drug users are aware of the negative effects of marihuana, yet they continue to use it. This indicates that marihuana use provides some kind of satisfaction. The dimensions of the pleasurable and reinforcing aspects of marihuana use should be delineated and explored.

A study of marihuana users who are "successful" would be helpful, particularly of those older individuals who have not developed any impairment of their occupational functioning or interpersonal or social relationships. It would be interesting to learn how these individuals integrate marihuana usage into their life style; what effects it has on their functioning; and how they have managed to cope while other marihuana users have not.

Institutionalization of Marihuana

The role played by the media, especially television advertising, in glamorizing and fostering marihuana and other drug use, poses a difficult research problem. The impact of the mass media in the drug area, and also its possible influence in shaping other social problems, should be known.

Marihuana and Industry

Very little is known about marihuana use by individuals in many occupations and industries.

To determine the extent and the effects of marihuana use in the transportation industries is important. The use of marihuana by pilots, air traffic controllers, and other key personnel must be related to air safety. Similar situations may also exist for key personnel in other transportation industries.

Another problem is the relationship between marihuana use and productivity. Although there has been much discussion about the "amotivational syndrome" and marihuana use, there has been no definitive research to date. The discussion of productivity has focused on youth—either their performance in school or lack of interest in upward mobility. Research on adult usage and productivity is limited; equally unknown is how this relationship of marihuana use and productivity varies from occupation to occupation or industry to industry. Study in this area posits the methodological problem of obtaining cooperation from workers and employers who are usually reluctant to participate in research projects.

Marihuana and Driving

Studies investigating the relationship between marihuana and driving are beginning to yield useful information. Retrospective toxicologic post-mortem studies of drivers involved in fatal accidents should be conducted. Research directed at determining the relative risks involved in using marihuana and other drugs while driving may be accomplished by surveys of drivers on the road. In addition, it is imperative to study the effects of marihuana on driver performance and other related driving tasks, such as decision-making, judgment, and spatial perception to understand the role which marihuana may play in traffic accidents.

Cross-Cultural Studies

Systematic cross-cultural studies of marihuana use are in their initial stages. Research is required to determine the mode and frequency of consumption in different populations, the percentages using, the spread across different age groups, the social categories most prone to use, and the relationship of marihuana consumption to the use of other drugs. Equally important is the study of social and personality factors associated with non-use as well as use. In developing these cross-cultural studies, the careful selection of controls and test subjects representative of the populations studied is essential. It is also desirable that these studies be carried out in countries which vary in their acceptance and consumption of marihuana.

Education Programs

Although marihuana is not treated as an isolated entity in the field of drug education, a look at future needs in this field is necessary insofar as nearly all drug education programs include a discussion of marihuana. The field of drug education is one which requires not only findings from basic research, but urgently needs information derived from applied research in the field. Because a great deal of time, money and effort are being poured into drug education programs, their effectiveness must be carefully evaluated.

Research should be directed at assessing the characteristics required of an effective drug communicator; delineating individual and subcultural differences found in response to drug education programs; and specifying the interaction between drug abuse education and other community influences. It is well-known that the home, church, and peer groups affect drug abuse behavior. Precisely what role these social structures play in determining such behavior, and how effective drug education can be within the context of these possibly conflicting institutions has yet to be determined.

In addition to information about factors which determine the effectiveness of drug education programs, a need also exists for programmatic information about such education efforts. Surveys should be conducted to assess the number and quality of programs at the elementary, secondary and college levels. Also needed is information about the number of community education programs, the types of community education programs which exist, and who administers them. In addition, it should be determined how students, adults, and educators involved perceive the educational value of these programs. This information is needed to understand what is being done in the field and to assess the impact of drug education on drug use.

Legal and Law Enforcement

Legal and law enforcement research is essentially of two types: one involves the impact of law enforcement procedures upon the social order; and the other focuses upon improving detection and eradication methods.

Evaluation of Criminal Justice System

A minimum of significant research has been conducted into the interaction of the legal system

and the patterns of marihuana use. Starting with the law enforcement agent, it is desirable to know how he views marihuana use, what strategies he chooses to effect a marihuana arrest, and what strategies might be used in different communities. Society should know how those arrested for marihuana use differ from the general population of marihuana users, and what factors lead to a higher arrest rate for certain segments of the marihuana-using population and a lower arrest rate for others. It is important to know whether age, sex, race, or class influence the disposition of a charge after an arrest is made, that is, whether certain individuals have charges dismissed while others receive prison sentences or are placed on probation. Since these are matters determined by prosecutors and judges, this would require studying their roles in the judicial process.

In addition, information obtained while gathering data for the marihuana report indicated that different jurisdictions had developed alternatives for the criminal process; for example, some jurisdictions send marihuana offenders to social agencies while others place individuals on "probation" with a promise to expunge the record if the individual remains on good conduct. A study should include the effects of these options and the alternatives within the criminal justice system upon the behavior of marihuana users. The rate of recidivism with each of these alternatives and the rate of other types of crimes associated with the adoption or practice of each of these alternatives should be known.

Improving Data Systems

One of the major problems in reviewing the impact of law enforcement on marihuana consumption is the lack of an adequate statistical reporting system at both the federal and state levels. The difficulties center around a lack of uniformity in the data collected, a failure to separate marihuana cases from narcotic cases, and inaccurate record keeping and lack of detailed information on each marihuana case; in some instances, there are no records of case disposition or the law enforcement strategy used to make the arrests. A precise reporting system is essential for two reasons. First, law enforcement agencies must effectively evaluate the allocation of their resources. Second, social scientists and policy makers must have valid data in order to understand the relationship of marihuana use (as indicated by police contact) to other social phenomenon, particularly changes in social policy.

The federal and state prison systems present similar problems for marihuana researchers. Although the total number of marihuana convictions is a matter of record, it is impossible to tell how many individuals apprehended were convicted for possession, sale, or smuggling of marihuana. To assess the relationship between incarceration and marihuana use is difficult.

Trafficking Patterns

A more precise description and study of the flow patterns of illicit traffic in marihuana is needed. Research is needed on the relationship between changes in these patterns and changes in social policy, as are studies of the interaction between the volume of hashish and that of marihuana traffic.

Detection of Cannabis

Several other areas of needed research include improving methods for the detection of marihuana. One has to do with the identification of the marihuana plant itself, while the other is the detection of marihuana through the analysis of body fluids. Although the presence of marihuana can be detected through facial wipings, this is not conclusive. Traces of marihuana may be present on the faces of individuals merely occupying a room where marihuana had been recently smoked. Research on the metabolism and excretion of marihuana is needed to develop simple, fast, accurate and inexpensive laboratory tests.

Research on detection of the marihuana plant is expanding. The identification and characterization of the "head vapors" of marihuana and hashish are methods which require further study. Another is the development of a technique for rapid detection and analysis of marihuana in the field. Preliminary work on a color test without elaborate laboratory facilities is being done to solve this problem. Research is also needed to develop and refine aerial spotting techniques; this may involve continuing study of the photochrometric signature of marihuana.

Eradication Programs

The eradication of marihuana is an extremely difficult, if not impossible, task. Chemical controls which will not produce harmful ecological effects are needed. Additional effort may be directed at studying the life cycle of marihuana, and its insect and pathogenic enemies. One of the more interesting attempts to eradicate marihuana lies in the area of genetic botanical control, or the attempt

to breed out the psychoactive ingredient in marihuana and increase its fiber content.

Conclusion

These general experimental questions and future research requirements highlight the concerns of

all marihuana researchers in both the public and private sectors. Since additional information about marihuana is vital to the decision-making processes of social policy planners, law enforcement officials, and medical practitioners, the practical significance of implementing these future needs cannot be overemphasized.

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Research Papers Prepared for the Commission

"Public Attitudes Toward Marihuana" (A National Opinion Survey)

Herbert I. Abelson, Ph. D.
Reuben Cohen
Diane W. Schrayner
Response Analysis Corporation
Princeton, New Jersey

"Seminar: Central Influences on American Life"

Harry Boardman, Secretary General
The Salk Institute
La Jolla, California

"Marihuana Use: Values, Behavioral Definitions and Approaches to Social Control"

Richard Brotman, Ph. D.
Frederic Suffet
New York Medical College
New York, New York

"Social Structure With Respect to Marihuana Use and Abuse"

James Carey, Ph. D.
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Chicago, Illinois

"Control of Marihuana Under the Single Convention on Narcotic Drugs, 1961, and the Convention on Psychotropic Substances"

Nell Chayet
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"Socially Competent Marihuana Users"

Louise Epps, Ph. D.
Ira Frank, M.D.
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"Alternative Models and Statutory Schemes for Controlling Marihuana"

Vincent R. Fitzpatrick
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and
J. Dean Heller
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"Drug Escalation: Marihuana Use as Related to the Use of Dangerous Drugs"

Erich Goode, Ph. D.
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"Marihuana Use and Crime"

Institute for Survey Research
Temple University
Philadelphia, Pennsylvania
and
Erich Goode, Ph. D.
State University of New York
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"Relationship Between Marihuana Use, Crime and Juvenile Delinquency"

InTech Corporation
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Wilkes-Barre, Pennsylvania

"The Crime of Cannabis: From Detection to Disposition—An Empirical Analysis of Enforcement of the Marihuana Laws in Six Metropolitan Jurisdictions"

Weldon T. Johnson, Ph.D.
University of Wisconsin
Madison, Wisconsin
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Robert Bogomolny
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"Youth Drug Use Survey"

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"Adolescent Socialization and Marihuana Use"

Gerald Marwell, Ph.D.
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"The Use and Effects of Cannabis"

William H. McGlothlin, Ph.D.
University of California
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"The Rise and Fall of Prohibition"

"Tobacco Regulation: The Reflection of Industry, Government and Consumer Interests"
Jane Lang McGrew
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"Behavioral and Biological Concomitants of Chronic Marihuana Smoking by Heavy and Casual Users"

Jack H. Mendelson, M.D.
Roger E. Meyer, M.D.
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"Marihuana and Drug Education Programs in Black Colleges"

Joseph C. Paige, Dean
Federal City College
Washington, D.C.

"Survey of Marihuana and Drug Education Programs at the Continuing and Adult Education Level"

Robert Pitchell, Executive Director
National University Extension Association
Washington, D.C.

"Aspects of Marihuana Use: A Survey of Free Clinics and College-University Health Services"

Gerald L. Robinson
Stanley Renshon
University of Pennsylvania
Philadelphia, Pennsylvania

"A Review of Selected Surveys on Marihuana Use"

Philip C. Sagi, Ph.D.
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"Marihuana and Crime"

Jared R. Tinklenberg, M.D.
Stanford University Medical Center
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**"Analysis of Statutes Requiring Physicians to Report
Drug Addiction to Governmental Agencies"**

**Michael R. Vaughan
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"A General Picture of the Charas Habit in Afghanistan"

**Salamuddin Weiss, M.D.
Kabul University Medical School
Kabul, Afghanistan**

**"The Relationship Between Severity of Disposition and
Subsequent Criminal Behavior in a Sample of Youthful
Marihuana Offenders in New York State"**

**Martin Weitzner, Ph. D.
Israel Gerver
Harriet Pollock, Ph.D.
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"A History of American Marihuana Legislation"

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"Psychosocial Factors and Marihuana Use"

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